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## Worldwide Report

# EPIDEMIOLOGY

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22 November 1985

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INTER-AFRICAN AFFAIRS

FIGHTING ONCHOCERIASIS IN WESTERN AREAS

Niamey LE SAHEL in French 9 Sep 85 p 4

[Article by Issaka Saidou]

[Text] It was 10 years ago that West Africa watched, its heart breaking, as a horrifying spectacle unrolled: people were fleeing from their villages, abandoning their lands and streams. Whole families were scattered, agriculture and cattle-raising banned... it was a race to survival. People had, at any cost, to flee to some shelter, because the enemy was upon them, threatening them, advancing inexorably! It flew in on wings, because that dread enemy was nothing but a fly: *Simulium Damnosum*, carrier of the horrible disease known as onchocercoses, otherwise known as river-blindness.

As the sworn enemy of the rural people living along the streams that watered their fertile lands, the fly sowed panic, death, and desolation in West Africa. A crippling disease, it permanently blinded thousands of people. That, of course, does not include those it killed outright. And the worst of it is that nobody knew (nobody knows even now!) of any vaccine that can prevent it or any drug that can cure it!

What to do, then? The answer to that question lies with the countries "affeted" by this disease, to wit: Benin, Ivory Coast, Ghana, Niger, Burkina, Togo, and Mali -- working with international agencies (WHO, FAO, World Bank, UNDP), and some kind donors who would discover it in 1974. Looking at the severity of the situation they decided by common agreement -- and after a lot of tiresome procedures -- to mount a massive campaign to fight this disease.

And so the "program to banish onchocercoses from the Volta Basin" was born. Its strategy is simplicity itself: strike at the roots of the evil. In other words, find a way to strike back at *Simulium* by "blocking transmission of the disease or confining the fly in ways that would protect the communities along the river against the threat of onchocercoses."

## A Winner

Since the goal now was not only to protect people against blindness, but also to enable them to reclaim and nurse the lands they had deserted back to health, the strategy consisted of spraying the streams contaminated by the deadly fly with insecticide.

The operation extended over an area of some 750,000 square kilometers in the major river basins of West Africa, and today it has won "a real victory." In any case, that is what emerged from a conversation we had with the Secretary-General of the Ministry of Public Health and Social Affairs, Mr Daga Magagi, and Dr Ba Omar, a WHO expert in the fight against onchocercoses at a meeting for exchange of information on the fight against this disease, which recently concluded its work in Niamey last week at the National School of Public Health. Ninety percent of the land in the original program area is now free of the disease, we learned. Furthermore, if you look at the incidence of the disease expressed in terms of the number of children born since the battle was joined, you find that 3 million of them are now immune to the disease and are in no danger of contracting it.

## Renewed Invasion in Some Zones

The problem, given the fact that this is a gigantic operation, is that there are still some zones in the program area that have not been treated, and that is inevitably going to make the job more complicated because Simulium, whose potential flight-range is enormous (more than 150 kilometers) is reinvading the treated zones. That renewed invasion, which, in the long run, will undermine the excellent achievements of the program, is occurring mainly in the West and Southeast, coming from neighboring countries which are not covered by the initial program zone.

It is this state of affairs, for that matter, that explains in part the session at Niamey last December of the joint committee of the anti-onchocercoses program. It was agreed at that meeting -- it will be remembered -- to move to expand the program area to the West and to the Southeast by some 550,000 square kilometers.

Where do we stand today, then? According to Dr Ba Oumar, activities are already underway and involve primarily Western Mali, Guinea-Bissau, Senegal, and Sierra Leone. To the Southwest, those affected are Benin, Togo, and Ghana.

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CSO: 5400/5

CENTRAL AFRICAN REPUBLIC

AIDS IDENTIFIED AS SERIOUS PUBLIC HEALTH PROBLEM IN REGION

Johannesburg THE CITIZEN in English 28 Oct 85 p 4.

[Text] BANGUI. — The nations of Central Africa, where Aids has been identified as a serious public health problem, face major difficulties in combating the deadly disease, medical experts believe.

Delegates to a 13-nation Aids workshop in Bangui, capital of the Central African Republic, wound up four days of talks this week with proposals for diagnosing, quantifying and preventing the spread of Acquired Immune Deficiency Syndrome in the region.

Progress has been made, delegates said, in getting countries from Central Africa together for the first time to discuss Aids among themselves and to make a start in working out ways to face up to the problem.

But there are daunting obstacles, with health budgets already stretched to cope with diseases such as malaria, diarrhoea and malnutrition, which kill many more people than Aids but attract far less publicity.

Dr Joe McCormick, a senior virologist from the US Centre for Disease Control, a major Aids research facility, told Reuters that the main obstacle to the fight against Aids in Central African countries was lack of resources.

"They don't have the training and the tools of communications and analysis,"

he said in an interview.

The workshop recommended that three laboratories, in Gabon, Zaire and the Central African Republic, be used to co-ordinate the fight against Aids, but the delegates said they were not in a position to allocate funds.

Aids, first identified in 1981, destroys the body's normal defences against infection and lays patients open to diseases they might otherwise not catch.

Figures from the World Health Organisation (WHO), which ran the meetings at the Pasteur Institute in Bangui, show that over 16 000 cases of Aids had been reported worldwide by mid-October, with nearly 14 000 in the United States.

There is as yet no known cure for Aids, and, according to the WHO, scientists are not optimistic about the chances of developing a vaccine in the immediate future.

The picture in Central Africa is clouded by the fact that apart from South Africa with a reported 23 cases, no African country has notified the WHO of a single case of the disease.

Dr McCormick gave no figures for the number of Aids cases in Central Africa but said: "One would guess it is growing at the same rate as in Europe or the United States."

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CSO: 5400/28

DENMARK

# AIDS RESEARCHER FORECASTS INCREASING CASES, COSTS

Copenhagen BERLINGSKE TIDENDE in Danish 15 Oct 85 pp 1, 3

[Article by Henning Ziebe: "40,000 Bed-Days for AIDS Victims in 1987-88"]

[Text] It is reckless beyond belief that the authorities have not faced reality yet concerning the coming AIDS-problems, says professor, Dr Viggo Faber.

"In 1987-88, there will be a need in Denmark for just about 40,000 bed-days--contrasted with 4,000 this year--just for patients with AIDS, and therefore, it is 'last call' if the authorities are going to be able to prepare for the enormous efforts which the disease will require, and it is reckless beyond belief that we have not yet faced up to these problems which will be presenting themselves very soon," says professor, Dr Viggo Faber of the National Hospital.

Based on foreign reports--among others, from the English medical journal, THE LANCET--professor Faber was asked by BERLINGSKE TIDENDE to estimate the spread of AIDS in Denmark and the need for hospital places for treating AIDS patients in the coming years.

The contagious disease department of the National Hospital, however, already has sent some figures to the authorities which demonstrate that in 1988, there will be 630 AIDS patients registered in Denmark, of whom, 315 still will be living. This will require more than 100 hospital beds in the greater Copenhagen area, with a total of approximately 40,000 bed-days. If one figures an average cost of 3,000 kroner for patients with contagious diseases, hospital costs alone for the hospitalized AIDS patients will run up to 120 million kroner in 1988.

"It is incomprehensible that the Danish society does not work any faster to learn about the scope of the problem since we have, additionally, a sickness, the spread of which can be predicted with reasonable certainty," warns professor Faber.

"Just go to the United States if you don't believe us. No responsible authority yet has been to the United States to study the disease which more than any other will come to burden the health system in the coming years."

"We know that the costs of prevention, diagnosis, treatment and research concerning AIDS in the coming years will become extremely great, and I am afraid that suddenly we will lack hospital beds for the patients because we have not dealt with the situation fast enough," states professor, Dr Viggo Faber of the contagious disease department of the National Hospital.

"If the authorities do not believe us when holler, they ought at least send politicians and civil servants to the United States to study how things are being attacked. Not just bed-wise, but also from social perspectives. One should study what problems are arising when such a large group of people gets a serious illness and at the same time discovers discrimination. One should study how support groups are being formed in other places and how work is being done so that everyone understands that this is a disease which does not just concern a certain few risk groups."

#### 300 Million Kroner Against Smallpox

"In the beginning of the 1970's, we had a couple of cases of smallpox and within the course of two months, 300 million kroner were fired off to prevent an epidemic. But that was small change in comparison with what it would have cost if Copenhagen had been declared a closed city by WHO. And that was just about to occur. Since then, no one has thought at all about epidemics in Denmark.

"Delegations constantly are being sent to foreign countries to study traffic, sewage disposal and a lot of other things. But we have not acted responsibly yet in studying the disease which will come to burden health budgets more than anything else in the coming years. Fortunately, in the municipalities of Arhus and Copenhagen, efforts are about to begin on certain minor expansions of the departments where AIDS work is being done, but the National Hospital is still waiting. We are working at full steam, but if a patient today requests to be examined for AIDS, he will not get an appointment until the middle of November," says Viggo Faber.

#### University Understands

"There is a bright spot, however, in the fact that the University of Copenhagen has comprehended how important it is to support AIDS research and therefore, we in the contagious disease department just have received seven grants of three months duration each to work with AIDS in various connections. The work will show, among other things, whether AIDS can be detected through enzyme measurements. Other projects will involve studies of various diseases among patients with decreased immune defenses, and a particular reaction among allergenics to medicine used in treating AIDS, as well as studies of whether poor adrenal function contributes to worsening patients' conditions, and so on. In addition--thanks to the university and the gift of 5 million kroner from Janni Spies--we now have established a separate AIDS laboratory with a new English apparatus for diagnosing AIDS antibodies, which, according to the English, should be far more accurate than anything up to now."

### Enormous Figures

"A couple of bright spots which, however, should not hide the fact that this is serious and that it is 'last call' for the authorities if we, like San Francisco, are not going to regret bitterly some day that we did not act quicker in learning from the spread of AIDS in New York. In the United States, it is figured that the costs of AIDS in 1984--including lost work--are up around \$1.5 billion. And a rough estimate can cause us to fear that in 1990, Denmark will have 1,350 patients alive with AIDS and the need for 170,000 bed-days. Even though the estimate is imprecise, it shows how serious it is that one prepare quickly for the expensive AIDS-future," concludes professor Faber.

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CSO: 5400/2506

GUYANA

BRIEFS

FIRST MEDICAL SCHOOL--Georgetown, Nov 4--Guyana has opened its first medical school, with 25 students to be trained for six years. Speaking during the opening ceremony at the university of Guyana campus, six miles outside Georgetown where the school is located, President Desmond Hoyte said the new institution would improve and secure the health of the people of this country. He described it as an aspect of the principle of self-reliance to which we subscribe in Guyana. The president said the school would be heavily oriented towards community medical service. Health Minister Dr Richard Van West Charles said the medical school, under the aegis of the University of Guyana, would produce community-oriented physicians competent in health promotion, as well as preventive, curative and rehabilitational aspects of medicine. The Cuban Government assisted Guyana with the establishment of the school, and medical experts from Havana will be among the lecturers. Assistance also came from the Pan-American Health Organisation and the World Health Organisation (PAHO/WHO). [Text] [Bridgetown CANA in English 1617 GMT 4 Nov 85 FL]

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CSO: 5440/13

ICELAND

# FIRST AIDS CASES REPORTED IN COUNTRY

Reykjavik MORGUNBLADID in Icelandic 26 Sep 85 p 64

[Article: "Several Icelanders Suffering From Primary AIDS Symptoms"]

[Text] It has been confirmed that several Icelanders are suffering from primary symptoms of the serious disease Acquired Immune Deficiency Syndrome [AIDS]. The symptoms are enlargement of the lymph nodes, slight fever, diarrhea, tiredness and an overall fatigued feeling. It has been mentioned previously that the AIDS virus has been found in the blood of several Icelanders without any symptoms of the disease. This came forth in a conversation with City Hospital Doctors Sigurdur Gudmundsson and Haraldur Briem who are both specialists in infectious diseases.

According to Dr Gudmundsson, the progress of the AIDS disease is usually divided into four stages. The first stage is when antibodies against the virus are formed in the blood which is an indication that an infection has taken place, although no symptoms appear. It is estimated that about 70 percent of those who contract the disease and form antibodies will never show any signs of having AIDS, although some of those can, however, be contagious.

In the second stage, which is rare according to Dr Gudmundsson, people suffer from a throat infection for a certain time and show signs of enlarged lymph nodes and then seem to be completely cured.

In the third stage, however, the so-called primary symptoms that were described above appear. Dr Gudmundsson said that experts estimate that between 15-20 percent of those who contract the virus get these third stage symptoms. It is, however, estimated that 30 percent of those who contract the disease at this stage will also suffer the fourth and most serious stage, the real AIDS which leads to the death of 80 percent of the patients within 2 years. At that stage, people contract infections that are extremely rare among people who have normal immune systems; also, these patients are plagued by two types of cancer, cancer of the skin which often spreads to internal organs and cancer of the lymph nodes which sometimes starts in the brain. No Icelandic has shown symptoms of AIDS at the fourth stage.



It is now known for certain that world-wide 15,000 people suffer from AIDS at the fourth stage; 13,000 people in the United States and 600-800 in Europe. There are only three European countries where no cases of real AIDS have been found, Poland, Czechoslovakia and Iceland.

According to Dr Haraldur Briem, the finishing touches are now being made on a special laboratory at the City Hospital for research of blood samples of individuals who carry the AIDS virus. Antibody tests have not been conducted here yet and the Swedes have carried out all tests for the hospitals here in the past. Dr Briem said that it is extremely urgent to begin doing the tests here in Iceland and work on that is now being prepared by the University of Iceland Institute of Pathology and Bacteriology. Dr Briem said, however, that if such a facility would not be made available soon, he expected that antibody tests would be started at the new research facility at the City Hospital.

9583

CSO: 5400/2501

INDIA

BRIEFS

EPIDEMICS IN INDORE--Indore (UNI)--Thousands of people in the city have been afflicted with Dengu fever, jaundice, malaria or gastroenteritis which have broken out in epidemic form over the past two months. A random check of the Maharaja Yashwantrao Hospital, ESI Hospital, Homoeopathic and Ayurvedic hospitals revealed that more than 2,500 patients were visiting these hospitals every day for treatment of these diseases. [Text] [Bombay THE TIMES OF INDIA in English 18 Sep 85 p 20]

LUCKNOW GASTROENTERITIS EPIDEMIC--Lucknow, September 19--Although the waters from the flooded Gomti have receded from many areas in the capital, thousands of residents are suffering from gastro-enteritis, influenza and encephalitis. The situation in the four relief camps in the city is grim. Preventive measures taken by the Luknow nagar mahapalika have been inadequate. Despite claims by the corporation that desilting operations and spraying of insecticides have been undertaken, this reporter did not find evidence of it. [Text] [Bombay THE TIMES OF INDIA in English 20 Sep 85 p 16]

CHILDREN'S 'MYSTERY' DISEASES--Sagar (UNI)--A mysterious disease affecting children, at Karaiyya village in Sagar district of Madhya Pradesh has so far claimed 12 lives. Three children affected by the disease, which, according to medical experts, is measles along with secondary infection like diarrhoea, dysentery and pneumonia, died during the last three days. In view of the alarming situation, the health department has decided to start a 15-bed temporary emergency hospital at Karaiyya village. [Text] [Bombay THE TIMES OF INDIA in English 20 Sep 85 p 23]

LEPROSY ERADICATION PROGRAM--New Delhi, Sept 21--Fourteen districts are being taken up for multi-drug treatment under the National Leprosy Eradication Programme, according to an official release here yesterday, reports PTI. The multi-drug treatment comprising dapsone, rifampicin and clofazamine, prevents development of drug resistant germs. This treatment is more effective than the monotherapy treatment by dapsone alone. The districts being taken up are Chittoor (Andhra Pradesh), Alleppey (Kerala), Chandrapur (Maharashtra), Cuttack and Sambalpur (Orissa), Rajnandgaon, Durg, Bilaspur and Raipur (Madhya Pradesh), South Arcot and Salem (Tamil Nadu), Barabani (Uttar Pradesh), Dangs (Gujarat), and Lakshadweep. Over 3.2 million leprosy patients have been brought under treatment up to April 1985. The annual detection of new cases is to the order of 400,000. About 400,000 patients are annually discharged as "disease arrested" or cured. [Text] [Calcutta THE SUNDAY STATESMAN in English 22 Sep 85 p 7]

MALAWI

LEPROSY VACCINE TRIALS

Blantyre DAILY TIMES in English 2 Oct 85 p ]

[Text] Malawi will from next year have leprosy vaccine trials, Mr. Christian Bodington, president of the British LEPRO project disclosed on Monday.

Mr. Bodington was speaking to MANA at Kamuzu International Airport on departure after a two-week tour of the LEPRO projects in the country.

He said in conjunction with the Malawi Government and World health Organisation (WHO) the British LEPRO Project was going to embark on trials for the next eight years in preventing leprosy using vaccines.

He said Karonga District in the Northern Region was chosen for the vaccine trials on 120,000 people.

He travelled all over the country inspecting the work of LEPRO and said he was impressed by the team spirit with which the LEPRO workers performed their duties.

Apart from LEPRO projects, he also visited LEPRO headquarters in Blantyre and other LEPRO offices in Kilongwe and Chilumba in Karonga.

Mr. Bodington said he was impressed by the fact that leprosy was being diagnosed in so many people, including children, at early stages, and that treatment for such cases was made much earlier.

Mr. Bodington, who is a career mountainer (attempted to climb Mount Everest three times and reached its summit only the third time this year), is also an author, a broadcaster and a television producer.

He said from the Lake District of England.

He also served as an officer in the British Army.

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CSO: 5400/23

MALAWI

#### DISEASE TREATMENT COURSE OPENS

Blantyre DAILY TIMES in English 24 Sep 85 pp 1, 3

[Text] Participants to a nine-week course in the treatment and management of priority diseases for Blantyre district have been asked to give their undivided attention to the course in order that they execute their duties well.

The call was made by the vice district Party chairman, Mr. A. Kanjala, when he officially opened the first in a series of nine week-long courses for health personnel from both Government and private hospitals in the district.

The Party official said since it was only a few years to the Year 2000, which was set by the World Health Organisation as the target year for Health for All it was important that participants adhere to what they were taught to help the nation meet the good health goal.

Mr. Kanjala therefore asked health officials to dedicate themselves to duty in order to meet this goal.

Earlier, a senior Health official based at Queen Elizabeth Central Hospital, briefed the participants on the aims of the course.

It is geared towards exposing the participants to the effective treatment of such diseases as malaria, malnutrition and diarrhoea which, for a long time, have contributed to high mortality rate of infants, the official explained.

He said it was the hope of the nation and the Health Ministry in particular, that emphasis be put on these diseases in order to lower or check the children's death rate.

The course follows a series of other seminars for facilitators which were held at both the national and regional levels, "after national statistics showed that despite the ten years pursuance of the maternal and child health programme implemented in 1973, the death rate of children was still high.

The course, which is conducted by seven facilitators, is financed by the Ministry of Health.

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CSO: 5400/23

MALAYSIA

MALACCA TYPHOID REPORTED

Kuala Lumpur NEW STRAITS TIMES in English 3 Oct 85 p 8

[Text]

**KUALA LUMPUR, Wed. —** The Health Department has traced 29 cases of typhoid fever in Kampung Cerunaputih, Alor Gajah in Malacca, and the necessary precautions have been taken by the State Health Services Department.

The Director of Health Services of the Health Ministry, Datuk Dr Abdullah Abdul Rahman, said the patients were treated in Government hospitals in Alor Gajah, Tampin and Malacca.

He said 16 patients were still being treated and they were said to be recovering.

Datuk Dr Abdullah said the outbreak started on July 18 and immediate action by the Malacca Health Services Department had brought the disease under control.

The last case was reported on Sept 15. — Bernama

/13104

CSO: 5400/4323

MALAYSIA

DISTRICT DECLARED JAUNDICE HIT

Kuala Lumpur NEW STRAITS TIMES in English 8 Oct 85 p 8

[Article by Lee Foo San: "District to be Declared Jaundice-Hit"]

[Text] IPOH, Mon. — Perak Menteri Besar Datuk Seri Ramli Ngah Talib will gazette the Batang Padang district — where viral hepatitis, or jaundice, broke out on Sept 14 — as an infected area.

This was one of the decisions taken by the Perak State Epidemic Control Committee, headed by State Secretary Datuk Seri Mohamed Nurzid bin Mohamed Wali, at a meeting today.

The committee met to review the situation and co-ordinate action by various Government departments and agencies to control the outbreak.

Members of the committee were briefed by the Director of the State Medical and Health Services, Dr Jagjit Singh, and the senior health officer, Batang Padang, Dr Lim Chie Kean, on the latest situation.

Datuk Seri Mohamed Nurzid said the committee was told that the source of contamination was the water supply to the land scheme and the handling of food.

He said the people did not cook their food and boil water properly.

"The source of the infection is the Trolak river and further upstream where an Orang Asli settlement is situated.

"It is possible, though it has not been ascertained, that the source of the virus might have come from the Orang Asli settlement. However, no cases of jaundice were reported there.

"If necessary, a temporary clinic may be set up in the Trolak Felda land scheme.

"Action is being taken to put more chlorine in the water supply as the pipe water may also have been contaminated.

"The area is surrounded by jungle and it is quite possible that many substances could have helped in the spread of the disease."

Dr Jagjit Singh said a total of 584 cases had been reported in the Trolak Felda land scheme up to today. For the district of Batang Padang as a whole, this brings the total to 651 cases.

"Over the last 24 hours, 53 new cases from Trolak were treated and of these, nine were admitted to the Tapah hospital and the rest (44 cases) were treated as outpatients.

"The number remaining in the hospital is 40 in Tapah and 11 in Tanjung Malim," he said.

He said the chlorination of water supply to Trolak is being stepped up.

Health education and community involvement

in the control is being intensified by the Health Department with the co-operation of the management of the land schemes and the Information Department.

Mobile health education teams will be sent again to the area. Talks to the settlers and others at last Friday's prayer meetings were held in the three affected areas.

Heads of schools in Trolak will be directed by the State Education Director to give talks to pupils.

The Education Department will provide boiled drinking water to school children during recess.

The State committee today directed the District Epidemic Control Committee under the Batang Padang district officer to actively co-ordinate control measures in the district.

"We expect more cases to be detected as a result of increased awareness of the people and intensified detection measures by the health staff.

"But we want to assure the public that all the necessary measures have been taken, and will continue to be taken," Dr Jagjit Singh said.

/13104

CSO: 5400/4323

MALAYSIA

MORE JAUNDICE CASES REPORTED

Kuala Lumpur NEW STRAITS TIMES in English 9 Oct 85 p 8

[Text]

IPOH, Tues. — Fifty-two new cases of viral hepatitis or jaundice were reported today in the Trolak Felda land scheme. This brings to 636 the number of cases in the area since the outbreak of the infection on Sept 14.

State Medical and Health Services Director Dr Jagjit Singh said the total number of cases in the Batang Padang district (which includes the Trolak Felda land scheme) is now 719.

He said 15 new cases were admitted to the Tapah hospital. There are now 42 jaundice patients at the hospital.

Five patients were admitted to the Tan-

jung Malim hospital which now has 12 jaundice patients.

Dr Jagjit Singh said preventive measures including health education were still being carried out in the affected areas.

"The chlorination of water supply, especially in the Trolak land scheme, is being maintained."

He advised people in the affected areas to continue to boil water before drinking and to eat only cooked food.

All precautions against the disease should continue until the epidemic is over.

/13104

CSO: 5400/4323



MALI

BRIEFS

CHOLERA BECOMING ENDEMIC--Cholera was becoming endemic in Mali the Health Minister said appealing for international help in a July 11 report. He said that in the year since last July, when the disease was first reported near the border with Niger, there had been 3,939 cases, 859 of them fatal. [Text] [Paris AFRICAN DEFENCE JOURNAL in English Sep 85 p 21]

/9274

CSO: 5400/23

MOZAMBIQUE

WIDESPREAD DISEASES IN CHEMBA DUE TO LACK OF VACCINES

Beira DIARIO DE MOCAMBIQUE in Portuguese 4 Oct 85 p 4

[Text] Instances of epidemics have been reported in Chemba, Sofala, as a result of the fact that vaccination programs were not carried out. This method of preventing diseases, which is extremely important insofar as the economical consumption of pharmaceuticals is concerned, has not been used for nearly 2 years. The last inoculations stipulated in the area of preventive medicine were given in early 1983.

In an interview with DIARIO DE MOCAMBIQUE, the district health director, Mario Zandamela, said that he considered the local health situation to be critical. He claimed that the quantitative costs of pharmaceuticals have risen; therefore, there is a shortage, and there is little treatment for patients.

This situation, analyzed by the subject of our interview, has created major difficulties in making the peasants aware of the need to visit the health stations; because even the less serious diseases are not always treated as they would be under normal conditions.

Mario Zandamela said, in this connection, that the lack of vaccines "has been felt since 1983. But this year, the district still engaged in its first activities. Since then, and up until now, we have not done any vaccinations, owing to the failure to receive oil for the preservation of the vaccines. The vaccines have to be well preserved and, without fuel, this is impossible."

The interviewee added that, last year, "we had the measles epidemic. Many children died as a result of that. This year, it is whooping cough, which affects children aged from 6 months to 4 years. There are children who do not yet have any resistance."

According to the Chemba health director, besides whooping cough, cases of tuberculosis are being found among children and even adults. Although no cases of tetanus have been reported as yet, the subject added that there were "leading factors which show that there are children who must be suffering from that disease."

Information supplied by the source discloses that, between June and July, several cases of whooping cough were reported. In this connection, during

the first, second, third and fourth weeks, respectively, there were admitted to the district hospital center 10, 20, 25 and 40 (in June) and 35, 30, 9 and 32 (in July) persons, all cases of whooping cough.

According to Mario Zandamela, to prevent certain epidemics there is a need for vaccines against tuberculosis (BCG) for children from age zero to 14, and against poliomyelitis, as well as inoculations against whooping cough (DPT).

On this subject, the director also said: "The major problem that we have is a lack of oil for preserving the vaccines. We are expending efforts to procure vaccines from Caia, to provide for some of the district's children. But this also requires transportation, and the health agency has no car available now. The motorcycles that we have lack fuel."

Nevertheless, the subject of our interview commented on the effort for awareness that has been carried out, alerting people to the need for sanitation. There are some toilets already in existence, although during this initial period there are problems regarding their proper use.

Furthermore, particular attention is being given to the program to expand the local sanitation system. However, there is the problem of the shortage, according to the subject, who remarked: "We have various facilities."

2909

CSO: 5400/21

MOZAMBIQUE

#### HUNDREDS OF CHILDREN VACCINATED IN MUCODZA

Beira DIARIO DE MOCAMBIQUE in Portuguese 8 Oct 85 p 5

[Text] Hundreds of children from families retrieved from the armed bandits in Gorongosa and now concentrated in the Mucodza area were recently vaccinated by a brigade from the preventive medicine district services. A similar number, who are being taken in every day on that site together with their respective parents, are receiving special care insofar as vaccination is concerned.

The provincial health director in Sofala, Dr Manuel Julien, with whom we traveled to Mucodza, told the reporter from "DM" that the principal diseases shown by those "recovered" are malaria, conjunctivitis, diarrhea and skin diseases. Although it has not yet been proven from a strictly scientific standpoint, it is presumed that bilharziasis is another disease affecting these people on a relatively low scale.

As a whole, the aforementioned diseases result from the consumption of water which is unfit and damaging to health. However, other situations capable of fostering and abetting the appearance and subsequent spread of countless diseases are intervening.

If we consider the fact that, in the area where there were many armed bandits up until relatively recently, people either did not bathe or did so without soap, and if we add to this the fact that they have spent nearly 4 years without medical assistance and eating the most diverse wild plants and roots, it will be easy to understand why they are carrying many diseases.

However, according to Dr Julien's statements, nearly all those diseases are indicative of a quantitative lack of water. This claim is based on the fact that the bandits kidnapped entire families, lacking the means for self-defense, who were taken to the areas adjoining their camps. There, those peaceful people had a twofold mission: to provide information on the FRELIMO troop movements, and to serve, from a tactical and strategic standpoint, as a social base for the bandits' defense and protection against a possible attack by our forces.

At the present time, the health agencies are engaged in creating conditions that will make it possible to prevent the outbreak of an epidemic of measles. "For this reason, we are adopting all possible measures," claimed Dr Julien.

Meanwhile, there are reports that, based on a first impression, the essential statistics indicate that this population is not very seriously affected by problems of a nutritional nature, although they have had difficulty in feeding themselves.

2909

CSO: 5400/21

MOZAMBIQUE

VACCINE DRIVE IN INHAMBANE UNDERWAY AS PEACE RETURNS

Harare THE HERALD in English 25 Oct 85 p 9

[Article by Sigurn Slapgard]

[Text] Chissubuca--People in this and other parts of Mozambique are used to the presence of the enemy.

The MNR bandits have since the beginning of the 1980s, done their best to disrupt civilian life in Inhambane Province. Villages, schools, health posts and ambulances have been attacked and destroyed.

In the surroundings of Chissubuca people have developed their own warning system against the frequent attacks. At the sight of the "bandos armados" they start banging their pounding sticks into empty mortars. The sound would alarm the neighbouring village without the rebels suspecting anything from such a daily activity. The signal would then be relayed to the nearby military post.

After several clean-up actions by the government forces the warning sound is now rarely heard. But as in most parts of Mozambique the once so regular and impressive programme of vaccination has been severely interrupted.

However, a new offensive has started in Inhambane. In Chissubuca the mobilisation started on a Monday. We arrived the following Wednesday, the D-Day for mass vaccination.

From above, Chissubuca looks like another quiet place with huts scattered around like raisins in a dry cake. Where are the people we wonder? But they are all there: in the shadow under the trees more than a thousand people are queueing up with their health cards.

"Their questions never stop," says Marcelino Costo, the enthusiastic vaccination programme. "The villagers wonder how a drop of liquid can prevent a serious illness and they have the right to know." After completing the three rounds of vaccination, lessons are also given about nutrition and preventive health care. Then the regular programme will take over again, whenever the mobile units are allowed to go out.

Inhambane Province is the first test-case in the immunisation programme in Mozambique. Vaccination takes place within a defined area during a short, intensive period. Then the results will be compared to those from the regular programme. The programme is a joint pilot project between the Ministry of Health, Save the Children (UK) and UNICEF.

In the early years of independence (1976-1979) Mozambique conducted a successful mass immunisation campaign, and from 1980 vaccination has been a routine part of the health services, both through mobile teams and stationary health units.

Since 1982, not only the security problems, but also lack of fuel and transport has led to a decline in the health care. Also, Inhambane was one of the worst drought-stricken provinces during the last three to four years, and the under-fives are easy prey for epidemic diseases. Outbreaks of paralysis (probably poliomyelitis) as well as measles and whooping cough occurred in Inhambane in 1984 and early 1985.

The urgency of vaccination is evident in the careful organization of the campaign. The complete plan with dates for mobilisation and vaccination for the seven districts involved, are kept secret until the very last moment to avoid detection by the bandits. Local authorities, including the armed forces, the governing Frelimo party and the Mozambican Women's Organization work closely together with the health services.

Working groups based on volunteers are organised and fuel, vaccines, equipment and food for the teams are provided by UNICEF. Only a few days after the mobilisation day vaccination takes place. By then all households would have had a visit from their local chief telling them the time and place. No vaccination day has so far been attacked, but a couple of planned vaccinations have been cancelled for security reasons.

From a local mini radio station set up by the Cabinet of Social Communication people hear songs about vaccination in their own language. Where there are no loudspeakers to reach them, the Cabinet has distributed their special issue of the magazine "O Campo" explaining the advantages of the vaccines.

In Chissubuca a stand with photos is also set up to explain various diseases. The exhibition is attracting an audience full of curiosity. A video team also from Social Communication is busy documenting the campaign. The whole scenario might seem more like a colourful feast with marimba rhythms in the background and dancing men all around.

But this is war, the axes of the warriors whirling around us are simply symbolic weapons. The real arms are the vaccines themselves.

/8309

CSO: 5400/27

NIGERIA

FEAR OF HERPES CAUSES PANIC

Kaduna NEW NIGERIAN in English 29 Oct 85 pp 1, 3

[Article by Matthew Onwundinjo]

[Text]

Zaria

IT has now been confirmed that students of higher institutions in and around Zaria, Kaduna State form the majority of the over one hundred victims of herpes, the deadly sexually-transmitted disease which was reported by *Sunday New Nigerian* last week.

The confirmation was made during *SNN* follow-up investigations by a Senior Medical Doctor who said the students were followed by married couples who engaged in "extra-marital activities."

But Dr. C.S.S. Bello, the Venereologist and Consultant at Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, declined to give the names of the institutions involved. He explained that he would not like to spoil the chances of students getting married in future. Dr. Bello however told the *SNN* that "campus reaction within the ABU, Zaria has been great" as he has been having a full clinic since the publication of the *Sunday New Nigerian* story.

He also confirmed that he had been receiving patients with V.D. from Lagos, Kano, Sokoto, Kaduna, Bauchi and

Funtua - all wanting to know whether or not they are afflicted by herpes.

Dr. Bello disclosed that he was able to refer a few of them to Britain to procure a drug known as ACYCLODIR (ZOUIRAX). This drug he explained, is now being experimented on in Britain. Giving further medical details on herpes, Dr. Bello said the deadly disease comes up on and off as it is transmittable when the wounds are fresh. But once they are healed, it cannot be transmittable again adding that "this incubation

period is usually between five to seven days after contact".

Meanwhile, free women in many of the hotels in Zaria have been out of business following the report of the outbreak of herpes.

Dr. Bello in view of the outbreak urged the Federal Government to provide diagnostic equipment and also make diagnosis and treatment of V.D. patients free of charge.

"It has to be free otherwise Nigerians suffering from various sexually-transmitted diseases will not turn up for treatment and if that happens it will not augur well for the country," he concluded.

/9312

CSO: 5400/18



NIGERIA

DIARRHEA DEATHS UNDER CONTROL

Lagos DAILY TIMES in English 14 Oct 85 pp 1, 17

[Article by Femi Ajayi]

[Text] Oral Rehydration Therapy (ORT), an improvised method for treating and preventing diarrhoea in children has reduced the rate of infant mortality in Lagos drastically.

Daily Times investigations revealed that the death rate in West Africa's largest children's hospital, Massey Street Children's Hospital, Lagos has fallen from an average of 20 a month to one, since the recognition of ORT as standard practice for treating children suffering from diarrhoea.

Sources said that all children sufferers of diarrhoea brought to Massey Street Hospital, apart from the seriously dehydrated ones who might have been put on intravenous drips, now undergo ORT.

With the above drop in death figures, medical experts said, the Massey Street Children's Hospital holds a record of almost 90 per cent success of ORT treatment for diarrhoeal-dehydrated children for the first six months of this year.

Out of about 1,020 children said to have received ORT treatment in the hospital, only two deaths have been recorded as against more than 50 deaths from dehydration which would have occurred in the absence of ORT.

A consultant in paediatrics at the hospital, Dr. Olumuyiwa Opaleye said: "With the introduction of ORT to replace the more complex and expensive intravenous drips, medical costs have fallen considerably."

According to the child health expert, the intravenous drip method, formerly widely used before the ORT, is too cumbersome and demanding. He said: "It normally requires the shaving of the child's scalp, the setting of a needle in the scalp vein, resence of tubes and glucose solution, bed confinement of the patient and the close attention of medical staff".

According to the Executive Director of Diarrhoea Dialogue, London, Miss Dennis Ayres, ORT is both simple, inexpensive and efficient. She said: "The use of ORT in treating and preventing diarrhoea is based on the knowledge

that glucose stimulates the absorption of salt and water in the small intestine". "Oral Rehydration salts solution replaces all the salts and fluids lost during diarrhoea and prevent further loss caused by diarrhoea, thereby averting dehydration", she added.

Miss Ayres said that ORT has brought cure within the reach of even the remote dispensary and the very illiterate nursing mothers, having succeeded in disseminating its technology outside the formal health structure.

While the WHO-approved formula for Oral Rehydration Salts (ORS) contains and glucose; for ORT at home level by nursing mothers, medical experts have recommended one level teaspoon of salt to 10 level teaspoons of sugar are expensive, Miss Ayres recommended the use of fluids and foods already available in the home such as rice, water, carrot soup or drinks made up from sugar, salt and drinking water for preventing dehydration from developing.

Daily Times investigations at LUTH's oral rehydration demonstration unit revealed that about 90 per cent success has been recorded. It was revealed that about 20 out of every 200 diarrhoea patients used to die monthly before the introduction of ORT, but since the ORT only about two have died every month.

Sources said that because of the success of the ORT in reducing the alarming infant mortality rate, UNICEF in collaboration with the Federal Ministry of Health has set up four zonal demonstration units in Lagos, Enugu, Sokoto and Yola.

Also, in furtherance of its support of the ORT approach to diarrhoea control, the Federal Ministry of Health has given the go-ahead to local pharmaceutical manufacturers to produce oral rehydration salts.

In addition, a major campaign to educate Nigerian parents on effective home management of diarrhoea, including a standardized approach to preparation and use of a safe and effective sugar-salt solution as a preventive measure against dehydration is being planned for 1986.

Efforts are also being to convince conservative medical doctors who are still committed to the complicated and expensive intravenous drip method, to appreciate the advantages of ORT and use them.

/8208

CSO: 3400/324

PAPUA NEW GUINEA

TYPHOID CLAIMS SIX LIVES

Port Moresby PAPUA NEW GUINEA POST COURIER in English 23 Oct 85 p 17

[Text]

**An outbreak of typhoid fever in the Asaro and Hengenofi districts of the Eastern Highlands has led to health authorities to conduct health education in villages.**

The assistant secretary for the Health Division in the Eastern Highlands, Dr Bill Bieber, said yesterday six people had died since last month.

Five were from Asaro, while the other person was from Hengenofi.

However, Dr Bieber said the outbreak had been contained, and more health workers were now in affected villages.

He said health officials were instructing the people on methods to ensure their water supplies were not contaminated.

Health authorities have launched a major

project to supply villages with water that is safe to drink.

Dr Bieber said the Government had allocated K60,000 this year for water supplies in the province, and a further K85,000 would be made available following a successful Asian Development Bank loan.

In another area of the Eastern Highlands, there have been reports of an outbreak of influenza.

Health officials said several people had died in the Marawaka District.

However, Dr Bieber could not confirm the report.

/12851

CSO: 5400/4317

PEOPLE'S REPUBLIC OF CHINA

GUANGDONG, SHANGHAI WIPE OUT SNAIL FEVER

OW310810 Beijing XINHUA in English 0740 GMT 31 Oct 85

[Text] Beijing, October 31 (XINHUA)--Snail fever (schistosomiasis), a parasitic disease once widespread in southern China, has been wiped out in Guangdong Province and Shanghai.

All affected areas are now completely free from oncomelania (an intermediate host of the parasites), all patients have been cured and all sick domestic animals cured or killed to remove the chance of future outbreaks, according to official reports available to XINHUA.

However, snail fever prevention and treatment centers will continue in operation to monitor the situation.

This year, 34 more counties and cities reported to have rid themselves from snail fever. They are in Jiangsu, Sichuan, Guangxi, Zhejiang, Hubei, Fujian and Anhui.

This has brought the total number of counties and cities free from snail fever in the 12 southern provinces and autonomous regions to 110.

Of the 11.61 million snail fever patients, 11.06 million have been cured, and snails have been got rid of from 11.1 billion square meters of the 14.2 billion square meters of the infested areas, according to the Ministry of Public Health.

The fight against the disease in 1950, the second year after new China was founded. [Sentence as received]

/6662

CSO: 5400/4101

PHILIPPINES

BRIEFS

**KALINGA-APAYAO MEASLES EPIDEMIC**--A measles epidemic was found raging in several stations in Pasil, Kalinga-Apayao by a medical team which visited the area last Sept. 21-23. Chandu Claver, a doctor and head of the medical team which travelled to Guinaang Proper, Gawaan, Jaldang, Bagtayan and Lisong confirmed 62 cases of measles with the usual complications of bronchopneumonia, gastroenteritis and febrile convulsions, and dehydration. The team was composed of medical and health workers and representatives of the Provincial Health Office and the Cordillera People's Alliance. Twelve people were said to have died last month alone from measles complications. Seven others were reportedly in advanced stages of complication and needed preferential attention. Claver recommended that a second team be sent by the PHO. The medical team also gathered reports of similar outbreaks in Tanglag, Pantikian, and Balbalan Proper. Some fatalities were also reported in these areas. [Text] [Cebu City VISAYAN HERALD in English 11 Oct 85 p 12]

/9274

CSO: 5400/4315

PORTUGAL

BRIEFS

AIDS PATIENT DISCHARGED--Our newspaper has learned from well-informed sources that a woman suffering from AIDS was reportedly discharged from the Curry Cabral hospital a few days ago, in spite of the fact that her condition would have justified continued hospitalization. It was reportedly the woman herself who asked to be discharged, and hospital authorities could not refuse her request, since there is no legislation that takes into account the emergence of this new disease. Moreover, another male patient suffering from AIDS reportedly died in the same hospital last Sunday night (14 October). [Text] [Lisbon O JORNAL in Portuguese 18-24 Oct 85 p 40]

/12948

CSO: 5400/2507

SOMALIA

OPPOSITION FORCES APPEAL FOR CHOLERA AID

EA192052 (Clandestine) Radio Halgan in Somali to Somalia 1700 GMT 19 Oct 85

[Text] Confirmed reports from Bai, Bokol, and Gedo regions say that the killer disease of cholera has spread into almost all the villages and towns. The reports add that villages like (Mora Gabey) and Baidoa towns, where almost everyone has been affected by the killer disease, are the worst affected.

Our reporter in the southern regions of Somalia says the Mogadishu government is hiding the spread of the killer disease from the international community and the WHO.

A spokesman for the Somali opposition forces has sent an urgent appeal to the international community, the Red Cross, the Red Crescent, the WHO, and the world at large to rush medicine and medical personnel to the cholera-affected areas of Somalia. The spokesman further appealed to the international community to make sure that the medicines and medical personnel reach the Bai, Bokol, and Gedo regions, where thousand of nomads and villagers have already perished.

CSO: 5400/14

SOUTH AFRICA

COMBATING HUMAN PARASITIC DISEASES DESCRIBED

Marshalltown SOUTH AFRICAN JOURNAL OF SCIENCE in English Aug 85 pp 451-452

[Article by C.H.J. Schutte]

[Text]

THE RESEARCH Institute for Diseases in a Tropical Environment, of the S.A. Medical Research Council, formerly known as the Amoebiasis Research Unit (ARU), was initially established to study the disease amoebiasis, but through the years its research programme has been expanded to include investigations on the epidemiology, diagnosis, treatment and control of certain tropical diseases and other health problems of poverty and poor living conditions among the different population groups of the Republic of South Africa. Research activities at the RIDTE therefore centre on the parasitic diseases of man, the most important of these being amoebiasis, schistosomiasis, malaria and cysticercosis.

**Amoebiasis**

On his return from war service, the late Ronald Elsdon-Dew, former Director of the ARU, came to realize that the major medical problem specific to Durban was amoebiasis. At the time, hospitals were crowded with patients undergoing treatment for what was generally known as 'the amoebic'. Over 2000 patients presented at the King Edward VIII Hospital annually with dysentery, liver abscesses or other frank complications; mortality was high and relapses common (Elsdon-Dew, unpublished document). Elsdon-Dew started work in earnest on amoebiasis in the 1950s and gathered about him a dedicated team of workers; they investigated both the biological and clinical aspects of the disease and its causative organism (*Entamoeba histolytica*) and led the field in the development of a drug (metronidazole) for curing the disease; they also devised excellent diagnostic procedures for identifying the presence of the parasite in man. Advances of this nature in the research on any disease would suggest that no further research is necessary and that the disease can be controlled. However, this is not the case and it is clear from the literature that invasive amoebiasis is still responsible for thousands of deaths annually, which places amoebiasis high on the list of parasitic causes of death on a global scale. Considering that the disease is still rife and claiming lives in South Africa (coastal Natal in particular), it is appropriate that the RIDTE should continue to be actively involved in its investigation.



One of the most intriguing questions which baffled researchers over the years was why *E. histolytica*, considered normally to be a commensal, can become a highly pathogenic invasive organism causing serious disease. Several hypotheses have been put forward for this phenomenon and it was only in recent years that it was discovered that the organism existed in two morphologically indistinct forms, namely a pathogenic and a non-pathogenic form; each of these consists of a number of different 'strains' (called zymodemes) distinguishable from one another on the basis of their characteristic isoenzyme electrophoretic patterns.<sup>1</sup> In Durban, for instance, all *E. histolytica* thus far isolated from symptomatic patients have been identified as pathogenic zymodemes<sup>2</sup>; non-pathogenic zymodemes have been isolated only from asymptomatic individuals.<sup>3</sup> Researchers at the RIDTE (Dr Gathiram, in preparation) recently also found pathogenic zymodemes in a small percentage of apparently asymptomatic subjects; however, when these individuals were followed up, some did eventually develop the disease whereas the rest consistently gave a positive result on serology, which shows that tissue invasion, albeit minimal, does in fact take place. Therefore, the hypothesis of a commensal organism which becomes highly pathogenic as a result of some or other stimulating factor would not seem acceptable any more.

With these new developments in the biochemical characterisation of the parasite, research on amoebiasis has entered an exciting phase in which the RIDTE plays an important role through its investigations of the biochemistry and molecular biology of the parasite and the epidemiology and pathogenesis of the disease.

#### Schistosomiasis (Bilharziasis)

It is estimated that approximately 2 million people in South Africa are infected with *Schistosoma* spp.<sup>4</sup> Despite this large number, probably less than 10% are suffering to a greater or lesser extent from the effects of infection with the parasite. Because the majority of infected people in our endemic areas are asymptomatic, and since schistosomiasis is not generally regarded as a significant cause of death in this country, public health authorities have given this disease a rather low priority. However, there is no reason for complacency; serious disease does occur and our knowledge of the true situation within our endemic areas is still far from complete.

Even though in the majority of infected subjects the parasite causes only minimal *direct* effects, there may be extremely important *indirect* or secondary effects. For instance, it was pointed out<sup>5</sup> that '... there appear to be *synergisms* between schistosomiasis and other diseases and conditions prevalent in the endemic areas that generally worsen the overall condition of the patient; ... schistosomiasis may *predispose* some people to cancer and other chronic diseases; ... parasites generally lower the *vitality* and *well-being* of an infected population.'

The schistosomiasis research programme of the RIDTE is aimed mainly at obtaining detailed information on the epidemiology of the disease; this includes community-based morbidity studies within areas in which schistosomiasis is endemic. It is hoped that in this way it will eventually be possible to determine more precisely the public health importance of the disease.

What we do know about schistosomiasis in South Africa is that both the urinary and intestinal forms of the disease are less severe than in other countries in Africa to the north.<sup>7</sup> There is a strong possibility that the South African strains of *S. mansoni* and *S. haematobium* are less virulent than the northern strains; there may be other factors involved and it is one of the goals of the RIDTE to find out why there should be such a difference. Researchers at the Institute are also involved in immunological and immunopathological studies on schistosomiasis in animal models and, in this way, should be able to make a substantial contribution to knowledge of the immunology of the disease which in turn might be valuable in the development of an anti-schistosomal vaccine.

### Malaria

Of the parasitic diseases which prevail in South Africa, malaria is given the highest priority. It is the only notifiable parasitic disease and large sums of money are spent annually on control and active surveillance in the endemic areas. Schistosomiasis, which has a much wider distribution in this country than malaria, is neither notifiable nor are any large-scale control measures undertaken.

Despite the outstanding work of the health authorities to control malaria, the disease is still rife and numerous cases occur annually in the endemic areas of northern Natal and the eastern Transvaal lowveld, which simply shows that our armamentarium is inadequate and that the ideal means of combating it has not been found. There are other problems facing the health authorities. Firstly, conservationists are concerned about the use of insecticides as they believe that these can have detrimental ecological effects. Secondly, the resistance of the mosquito vectors to insecticides has been reported in many areas where malaria is endemic;<sup>8</sup> it might be just a matter of time before this problem also arises in South Africa. Thirdly, resistance of the malaria parasite, *Plasmodium falciparum*, to chloroquine, widely used as an antimalarial drug, is also spreading.<sup>9</sup> Resistant strains of this parasite have already been identified in individuals in this country, although these patients had all been infected outside its borders. We should not underestimate the danger that such chloroquine-resistant strains can acquire a foothold here and that the local strains of the parasite can also become resistant.

From the above, it is clear that more efficient solutions must be found to control the threat of malaria. It is therefore essential that all aspects of the disease be carefully studied. To this end, the RIDTE is involved in investigating the transmission of the parasite, determining the vectorial capacity of the different anopheline species, and studying the ecology of the adults and larvae of the member species of the *Anopheles gambiae* complex. Considerable contributions to existing knowledge have already been made; this kind of information is indispensable in the fine-tuning of the malaria control programme.

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The Institute is also studying certain biochemical aspects of *Plasmodium falciparum*, which include characterisation of geographical 'strains' of the parasite; this will give some indication as to whether the species exists as a single interbreeding population or whether it consists of genetically distinct populations in different regions. Such information would, for example, prove invaluable when making predictions about and assessing the spread of drug-resistance. Furthermore, if and when an anti-malarial vaccine based on defined antigens becomes available, the vaccine might not be equally effective in human populations living in different parts of the country if such an antigenic diversity in *P. falciparum* populations does exist.

The monitoring of malaria transmission in the endemic areas is an important aspect of the malaria control programme. This involves the routine microscopical examination of thousands of blood smears throughout the year, which, of necessity, is both time-consuming and labour-intensive. In an attempt to overcome this problem, the RIDTE is currently involved in the development of simple and efficient diagnostic methods (based on modern techniques such as DNA-hybridization) which, it is hoped, will facilitate the surveillance of malaria.

### **Cysticercosis**

Human cysticercosis is caused by ingesting eggs of the pork tapeworm, *Taenia solium*. It has been described as the most common parasitic disease of the central nervous system and is a severe problem of developing nations. In the RSA it is estimated that up to 8% of rural blacks are infected with parasitic cysts and in certain high prevalence areas the figure may be as much as 20%.<sup>10</sup> The disease is not restricted to adults and the results of recent studies by RIDTE staff (Dr Pammenter, in preparation) suggest that up to 2½% of schoolchildren in the Transkei are infected. The majority of cases of cysticercosis are asymptomatic, but the disease can be severely debilitating and surgical intervention permits full recovery of working capacity in less than 50% of patients.<sup>11</sup>

The epidemiology of cysticercosis is one of the most necessary and neglected areas of research of this disease and virtually no information is available on the dynamics of transmission. Rain, birds and insects have all been implicated in the spread of bovine and ovine cysticercosis<sup>12,13</sup> but little is known about the porcine type. In South Africa information on the prevalence of porcine cysticercosis comes from abattoirs and this may not be a true reflection of the situation in rural areas. While cysticercosis can be detected serologically, tapeworm infections are rather difficult to detect in stool specimens and at this stage it is impossible to distinguish between *T. solium* and *T. saginata* eggs either by light or electron microscopy. This severely hampers epidemiological studies.

The RIDTE is ideally suited to undertake research into various aspects of the disease, its epidemiology in particular. The investigations currently under way aim at obtaining information on the prevalence of infection in man, immunological diagnosis of the disease, and methods of distinguishing between the two species. Considerable progress has already been made on the serodiagnosis of the disease; the sensitivity and specificity of the tests have been increased substantially.

It can therefore be seen that the RIDTE is in an extremely favourable position to make a substantial contribution to the combating of several parasitic diseases. Most of the foremost institutions studying these diseases are in countries which are far away from the endemic areas, whereas we enjoy the rare privilege of having these endemic areas virtually on our doorstep.

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CSO: 5400/16

SOUTH AFRICA

DOCTORS CAST NEW LIGHT ON AIDS VIRUS

Cape Town CAPE TIMES in English 9 Oct 85 p 9

[Text]

SEXUALLY Transmitted Diseases (STDs) have assumed "frightening proportions", said Professor A A Forder, president of the STD Society of Southern Africa, at the opening of the society's second international congress at the University of Cape Town Medical School.

Prof Forder said it was estimated that between 50 and 80 million new cases of STD occurred annually in the world.

"In South Africa there are many aspects of STDs that need to be addressed. Although completely reliable information is not available, the incidence of STDs, as reflected in the reports of the medical officers of health country-wide, reflect a high prevalence in this country."

In Cape Town there were 16.3 percent more new cases in 1984 than 1983, he said.

The only epidemiological records of STDs in Cape Town were provided by the municipal clinics where the reported cases represented only "the tip of the iceberg" or about 20 percent of the total estimated number of cases.

The Cape Divisional Council's MoH set the

total number of new cases of STDs in all races in 1984 at 3 119,358 more than in 1983.

IT was highly probable that the AIDS-causing virus could not only attack immune cells, causing immune deficiency, but also infect, and possibly damage, brain cells.

This was said yesterday by Dr Frank Spracklen and Dr Ruben Sher, members of the national AIDS Advisory Group speaking on the last day of the Second International Congress of the Sexually Transmitted Diseases Society of Southern Africa.

It was previously thought that the virus attacked only immune cells, but if the virus also attacks brain cells, it will change the way in which this disease manifests in people infected with the virus.

**Slow viruses**

Dr Spracklen also said two confirmed AIDS cases and one highly probable case had been seen in Cape Town, with another 10 people suffering from AIDS-Related Complex (ARC), a lesser and non-fatal form of the disease.

Speaking on the virus, he said it had almost cer-

tainly been misclassified during the early days of research. It was not an oncornavirus (which stimulates cancer development), as had been thought, but a lenti virus.

These viruses were sometimes called slow viruses because of the slow but inexorable brain damage they caused.

The AIDS virus had been found in the brain tissue of people with no immune deficiency. Half of British and American AIDS patients were developing a form of dementia which could be caused by the virus itself, rather than an opportunistic organism, as with other conditions associated with AIDS.

Dr Sher agreed that the AIDS-virus was similar to lenti viruses, but said it was too early to say exactly what the implications of this were.

He said of 461 gay men tested for AIDS antibodies in Johannesburg, 114 or almost a quarter were positive. There were 21 confirmed cases of full-blown AIDS in the country, not counting the latest case reported in Cape Town. Fourteen of these had died. There were about 90 ARC cases throughout the country.

SOUTH AFRICA

MEDICAL TEAM MAKES BIG VACCINE BREAKTHROUGH

Johannesburg THE CITIZEN in English 15 Oct 85 p 8

[Text]

A SIGNIFICANT research breakthrough has been made at the Veterinary Research Institute at Onderstepoort, a statement from the institute said yesterday.

The statement said for the first time ever, heartwater organisms have been successfully bred outside an animal, which could lead to the successful preparation of a true heartwater vaccine.

Dr D Bezuidenhout, an assistant director at the Institute and head of the Entomology Section, and Dr Camilla Paterson, a research veterinarian at the Institute, are responsible for the breakthrough.

After years of struggling to breed heartwater organisms on tissue cultures, Dr Bezuidenhout and Dr Paterson

saw their labours rewarded.

**Potential**

"This breakthrough with the in vitro breeding of the organisms has great potential for the development of an alternative heartwater vaccine, since it makes it possible to produce vaccines under controlled conditions in glass jars.

"This is a much more refined method of vaccines preparation and the chances for developing a true heartwater vaccine are very good," Dr Bezuidenhout said.

About 90 percent of all heartwater research in the world is done in South Africa, and for the first time since this research was initiated, said Dr Bezuidenhout, researchers feel they have a chance of beating the disease. — Sapa.

CSO: 5400/15

SWEDEN

# STUDY FINDS EVERY OTHER STOCKHOLM HEROIN USER HAS AIDS VIRUS

Stockholm SVENSKA DAGBLADET in Swedish 4 Oct 85 p 11

[Article by Bjorn Hygstedt]

[Text] The AIDS-specialists have recently sounded the alarm: practically every second heroin abuser in the Stockholm area is infected with the virus.

"Immediate action is absolutely mandatory. The alternative is catastrophe," says department official Jakob Lindberg, one of the authors of the report containing this alarming news.

The report was presented at the meeting of the AIDS Committee last Thursday. The committee members discussed the high level of apprehension demonstrated by the authors of the report, charging the municipalities and county councils with doing something, without waiting for further urging by the AIDS Committee.

The committee also determined to meet with representatives for social services and health care from the municipal organizations in the three major cities as soon as possible. Reports from these meetings should be made available before the committee meets next time.

## Dismal Prospect

As recently as last spring, most of the specialists in the field were unanimous on one point: that chances were good that the further spread of the AIDS epidemic could be prevented.

Today the prospect is much more dismal. The new report from the Social Board and the Social Department maintains that AIDS infection among narcotics abusers has spread considerably more swiftly than had been anticipated, particularly within the high-risk group of heroin addicts who use hypodermics.

## Four Out of Ten Infected

The report cites a study involving some 1,000 narcotics abusers in the three major urban areas. The results, which were brought together at the National

Bacteriological Laboratory, indicate that ten percent of all narcotics abusers are carriers of the AIDS virus HTLV 3. Among heroin abusers, some four out of every ten are infected. All of the infected cases come from the Stockholm area; the epidemic has not yet reached Malmo or Goteborg.

It is estimated that there are currently some thousands of heroin abusers in the Stockholm region, of which 80 percent live in the city itself. Additional heroin users in the entire country amount to at least a few thousand. But the data on the actual extent of intravenous abuse are uncertain. In a wide-ranging study made in 1979, the number of injection abusers was estimated at somewhere between 7,500 and 10,000. According to Jakob Lindberg of the Social Department, the figure is approximately the same today.

"The AIDS epidemic that is occurring among these drug abusers will have to be met with prompt and forceful action," Jakob Lindberg said. "Our goal, quite simply, will have to be to get the junkies to quit shooting up. That might seem over-optimistic, but there really is no other solution."

### Trying to Quit

The speed with which the AIDS virus has been spreading has increased the motivation of many drug abusers to at least try to quit using drugs. But up to this point society has not had the resources to subsidize this effort. Sabbatsberg Hospital in Stockholm alone has had to turn away 207 addicts requesting detoxification therapy.

"This is completely unacceptable," Jakob Lindberg told us emphatically. "Not only do we have to stop turning people away, but we will also have to develop our resources for locating people. Many of them never come in contact with facilities for care of addicts, despite the fact that the police and social authorities may know about them."

### Three Clinics

In Stockholm, there are only three detoxification clinics for adult narcotics abusers. Besides Sabbatsberg, there are also Danderyd Hospital and Huddinge Hospital. In Goteborg, addicts have a limited access to detoxification programs in the psychiatric wards. In Malmo, which has the next most heroin abusers in the country, there is almost a complete lack of resources.

This is why a number of experts are now demanding twice the resources within the available care facilities, as well as the reorganization of treatment procedures, so that a significantly higher number of abusers can be cared for. This would include those who are already carrying the AIDS virus.

"I hope that the fear displayed by medical care personnel has started to die down a little," Lindberg said. "In the United States, where the problem is of much greater extent than here in Sweden, not one single person involved in the medical care of drug addicts has become infected. The best thing would be to establish special crisis centers for narcotics addicts with AIDS, care facilities where they could come immediately after detoxification, where they could find support as well as accurate information about AIDS. Many people,



when they find out that they are infected, become desperate, and the risk of suicide goes up," he said.

#### Free Hypodermics

Several states in the United States have offered addicts free hypodermics in order to curtail the spread of AIDS infections. The authors of the report take exception to "solutions" of this kind.

There are currently 36 known cases of AIDS in Sweden. Eighteen persons have died of the disease so far. But there has been as yet no documented case of fully developed AIDS in any narcotics abuser. However, some cases of so-called "AIDS-related" diseases have been confirmed at Roslagstull Hospital in Stockholm.

#### New Groups Threatened

But the specialists are afraid that the disease is on the verge of making a breakthrough. In continental Europe, there were six confirmed cases of AIDS a year ago last summer among narcotics addicts. This summer, the figure was up to 66.

The situation is also made worse by the fact that many prostitutes are hypodermic-using narcotics abusers, and that sexual relations between addicted men and "clean" women do occur. Thus the risk of infection comes out into the street and spreads to new contact groups.

9584

CSO:5400/2503

THAILAND

AIDS PROBLEM DRAWS COMMENT, STATISTICS NOTED

Health Minister Interviewed

Bangkok NAE0 NA in Thai 24 Aug 85 p 8

[Interview with Marut Bunnak, the minister of public health; date and place not specified]

[Excerpt] The duties of the Ministry of Public Health concern the health of the people. During the 2 years that Dr Marut has controlled this ministry, what has he done and what does he plan to do in the future? The following are some of the things that he had to say.

[Question] What measures has the Ministry of Public Health taken to prevent the spread of AIDS?

[Answer] AIDS is a very frightening disease. Previously, there were only two reported cases. But the latest survey has shown that there are now about seven people with AIDS. They are being treated in various places. One person died about 2 months ago. We are afraid that this disease will spread. This disease destroys the immune system, which leaves the person susceptible to other diseases.

This disease originated among gays, or homosexuals. If a person with the disease has sexual intercourse with a prostitute, the prostitute can transmit the disease to others. The Ministry of Public Health has announced that AIDS is a communicable disease. That is, if a public or private hospital admits a person with AIDS, it must inform the Communicable Disease Control Department, Ministry of Public Health.

We have established an AIDS Coordinating Committee. Dr Winit Atwasasena, the director-general of the Communicable Disease Control Department, is the chairman of this committee. The committee is composed of doctors and experts from public and private institutes. The communicable Disease Control Department serves as the advisory center. The director-general of the Department of Medical Services has announced that cards will be issued to prostitutes who do not have AIDS. This should help somewhat.

[Question] How serious a problem is AIDS in Thailand?

[Answer] We should be able to solve this problem. I think that if the disease continues to spread like this, we will have to designate it as a serious communicable disease like smallpox. But things are not that bad yet.

But it is difficult to control. Because the only way that we can tell if a person coming into the country has AIDS is to take a blood sample. We will have to discuss things with other countries to determine whether there is any possibility of giving vaccinations against AIDS, whether there are any medicines available and what methods can be used. Today, there are no drugs to treat this directly. Before prohibiting people from entering the country, we have to discuss the matter with the countries concerned. We must coordinate things with the Ministry of Foreign Affairs. We are now discussing what action should be taken.

[Question] At present, there are not enough doctors. In particular, there is a great problem in the provinces. What measures are you taking to solve this problem?

[Answer] We are cooperating with the Office of State Universities. Approximately 800 doctors graduate each year. Approximately 500 of these go to work for the Ministry of Public Health. The other 300 go to work in various other government units such as the three military services, the Police Department and the Office of State Universities.

The 500 who come to work for the Ministry of Public Health draw lots to determine who will work in which province and district. A few years ago, the young doctors who went to serve as hospital directors in remote rural areas hurried to return after completing their tour of service. But now, these doctors are making great sacrifices. Rural medical associations have been established. Ninety percent remain in the rural areas. Things are improving.

In principle, a 10-bed hospital should have two doctors. This is already a reality in many districts. But in some districts, the 10-bed hospitals still have only one doctor. However, this is not a great problem. In the districts with just one doctor, there are usually only 30-40 patients a day. There are nurse practitioners who have taken the 5-year course. They can give shots and help the doctor. If there is a severe epidemic, people can be sent to the provincial hospital or to a nearby hospital.

At present, we are increasing the staff at the 10-bed hospitals that treat large numbers of patients. Where there are hundreds of patients, we are increasing the number of doctors to three. But by 1986, we expect to have two doctors at all the 10-bed hospitals. If there is a shortage, we can solve the problem. Like the police, the Ministry of Public Health has a radio network. The provinces and districts can contact each other. We can send patients to other hospitals.

### Precautions Urged

Bangkok NAE0 NA in Thai 22 Aug 85 pp 1, 16

[Article: "Steps Taken to Control AIDS, Four Hospitals Opened to Provide Examinations and Treatment"]

[Text] On the afternoon of 20 August, a meeting was held at the Ministry of Public Health to discuss controlling AIDS. Dr Winit Atsawasena, the director-general of the Communicable Disease Control Department, chaired the meeting. Those attending the meeting discussed the AIDS situation in Thailand. At present, this disease is still under control here and so it is not necessary to declare this a dangerous communicable disease. However, efforts must be made to inform the people concerned, or the people likely to come in contact with this disease, and have them get a physical examination.

There are four places where people can go to be checked for AIDS: the Sirirat Hospital, the Ramathibodi Hospital, the Chula Hospital and the Division of Venereal Diseases, Ministry of Public Health. The fee for the examination is 500 baht.

Those who should be checked include homosexuals, drug addicts who take drugs intravenously, people who have a chronic illness, leukemia, infected lymph glands or a chronic cold, people whose weight has dropped 10 percent or more within a 2-month period, people who have diarrhea for some unknown reason, male prostitutes and women who have sexual relations with foreigners or who are married to homosexuals.

To date, there have been five cases of AIDS in Thailand. Two people have died. There are two other patients with infected lymph glands, but they do not show any other symptoms. The virus has been found in five other people, but they do not show any symptoms.

### Westerners Feared in Spread

Bangkok MATICHON in Thai 17 Aug 85 pp 1, 16

[Excerpt] Dr Praphan Phanuphak, who is on the staff at the Chulalongkorn Hospital, said that last week, three American and European tourists asked to have their blood checked. One went to the Chulalongkorn Hospital and the other two went to a private hospital. The private hospital sent the blood sample to the Chulalongkorn Hospital for examination.

Dr Praphan said that the virus HTLV-3, which can cause AIDS, was found in the blood samples of the three foreigners. From questioning the three foreigners, it was learned that they liked to engage in homosexual relations and that they had had sexual relations with many gays in Thailand. Besides this, these three men have made frequent trips to Thailand.

Dr Praphan said that two of these tourists have now returned home. The third is preparing to return home this week. However, even though the three men do not exhibit any symptoms of AIDS, those Thais who have had sexual relations with them have definitely contracted the AIDS virus.

Dr Phrphan said that based on this, it is thought that the spread of AIDS is increasing. In particular, it is being spread by European and American tourists. Thus, to control this disease, homosexuals and those who engage in promiscuous sexual behavior should establish groups, or associations, in order to check the blood of those in the group on a regular basis. They should have sex relations only with other members of the group. Those in the group who have had a blood test should be issued a card to show that they do not have the AIDS virus and that they have had a blood test.

"As for those who provide sexual services, the hospital has contacted the owners of these establishments in order to have the people come in for an examination. The purpose is to prevent this disease from spreading. Also, those who work for airline companies should have another blood test," said Dr Praphan.

Dr Chanthaphong Wasi, who is assigned to the Pathology Section at the Sirirat Hospital, talked with MATICHON about what had happened. She said that, in general, this is not unusual. In Europe and the United States, immunodeficiency diseases are found in 20-40 percent of homosexuals. The discovery of this virus in a person does not mean that that person has AIDS. However, anyone who has the antibody in their blood can spread the virus.

Dr Chanthaphong said that the number of people in Thailand who have AIDS is increasing. Those who come in contact with this virus will develop AIDS within 5 years. The hospitals have formulated measures concerning this. The fact that these three foreigners came to Thailand and had sexual relations with a large number of Thais will definitely spread this disease. But in practice, it is impossible to prevent prostitutes from engaging in this occupation since that is how they earn their living.

Dr Chanthaphong said that studies conducted among homosexuals have shown that 1-4 percent of these people already have the AIDS virus. Thus, the number of cases of AIDS can be expected to increase in the future. What is even worse is that the virus can be transmitted from a mother to her unborn fetus. Cases of this have been found in the United States.

"Homosexuals and prostitutes do not like to be examined by a doctor. I don't know why. When we examine a person and find this virus, we can't say what will happen to that person. We don't know whether the person will die or just continue to spread the disease to others," said Dr Chanthaphong. She added that because the number of AIDS cases is increasing, the Communicable Disease Control Division, Ministry of Public Health, will hold a meeting of the AIDS Control Committee of Thailand on 22 August. Dr Mukda Tarutsayanon will chair the meeting. The meeting will discuss ways to deal with this disease. Plans for dealing with this disease will be formulated.

Department Director Interviewed

Bangkok SIAM RAT SAPDA WICHAN in Thai 18 Aug 85 pp 46, 47

[Interview with Dr Winit Atsawasena, the director-general of the Communicable Disease Control Department; date and place not specified]

[Excerpt] [Question] Would you tell us what the AIDS situation is like at present?

[Answer] The first case of AIDS in Thailand was reported in September 1984. To date, there have been five cases.

The first case was a Thai man who contracted AIDS in the United States. He was transferred to the Ramathibodi Hospital for treatment. He was a homosexual. He died in November 1984. He had not been in contact with anyone in Thailand.

The second case was reported at the beginning of December 1984. An American man came to the Ramathibodi Hospital for treatment. He had diarrhea and stomach cramps. The results of the examination showed that he might have AIDS. He left the country and went to Taipei for treatment. Lymphatic material was sent to the United States for tests, and it was found that he had AIDS.

The third case was reported at the beginning of March 1985. A German man came to the Chulalongkorn Hospital for treatment. He had an inflammation of the lungs. He went to the United States for treatment. An examination of his lymph glands showed that he had AIDS. This patient had had sexual relations with American men who worked in Thailand and with two Thai men. We were able to find these men and test them. The virus was found in one of the men.

The fourth case was reported at the beginning of March. A Thai man went to the Chulalongkorn Hospital with swollen lymph glands. The virus Cryptococcus was found in his blood and spinal fluid. The examination of his lymph glands showed that he had AIDS. He had had sexual relations with a foreign homosexual who had been in several different countries. Besides this, he had had relations with a Thai girl. She has been examined, and the results were positive.

The fifth case was reported at the beginning of May 1985. An American man was examined at a private hospital. He had an inflammation of the lungs. He returned to the United States for treatment. This patient had had relations with the third AIDS patient above.

All five patients had had sexual relations with foreigners.

[Question] What is being done to control AIDS in Thailand?

[Answer] The following steps have been taken to control AIDS:

1. The units that have discovered people with AIDS, the Epidemiology Division and the Communicable Disease Control Department have taken precautions, done tests and monitored those who have come in contact with the disease.
2. Studies have been done in order to discover AIDS cases in various groups.
3. The Ministry of Public Health has upgraded AIDS to a communicable disease that must be reported based on the 1980 Communicable Disease Act. This went into effect on 1 May 1985.
4. On 5 August 1985, the Ministry of Public Health established a committee to coordinate the control of AIDS. The director-general of the Communicable Disease Control Department is the chairman of the committee. The committee is composed of people from various public and private units. The committee is responsible for stipulating ways to diagnose and treat the disease, stipulating measures to control the disease, educating the people, carrying on public relations activities, recommending ways to conduct studies in order to find suitable methods to control the disease and coordinating disease control activities among the various units.

[Question] Is it true that you will recommend closing the gay bars?

[Answer] Closing those bars is up to the Ministry of Interior. The Committee to Coordinate AIDS Control Activities will meet on 20 August. But I don't think that we will recommend closing these bars. Something that can be done is to stipulate measures for examining people and making diagnoses. Also, there should be a center to compile data. If the hospitals cannot treat these people, they can be sent to our communicable disease hospital.

As for public relations activities, this can be handled at the same center. If various centers give out different information, things will just get worse.

[Question] Will it be necessary to check those who go to gay bars?

[Answer] Examining people is not easy, and the drug used is very expensive. It cannot be used with the general population. Only those who are suspected of having the disease will be examined. This will reduce the number who have to be checked. Otherwise, people will become paranoid about AIDS. The drug used to check for AIDS costs 250 baht per person. It has to be purchased from the United States. We will reach a decision on this at the meeting.

[Question] What can be done to control those who have the virus in order to keep the disease from spreading?

[Answer] We have to inform them that they carry the virus and that they should not have sexual relations with anyone. We must provide them with medical knowledge and make them realize that controlling the spread of this disease depends on them. In general, the problem is not between men and women. Eighty

percent of the cases involve homosexuals. Very rarely do heterosexual partners contract the disease.

[Question] If a person has the disease, can family members and those with whom he associates contract the disease?

[Answer] Yes, but it's not very likely. The most likely ways of contracting the disease are through having sexual contact, donating blood and using infected needles. You can't contract the disease just by sitting next to someone who has the disease.

[Question] The latest person to die was a student. Will it be necessary to examine students?

[Answer] No. He happened to be a student at a university and had a history of involvement with foreigners.

In addition to the five cases I mentioned above, four other people who have been checked for the antibody have shown positive results. But they do not yet have the disease. One of these four is a woman. The latent period of this disease ranges from 6 months to 3 years. It's impossible to tell when the disease will manifest itself.

[Question] Will foreigners be checked before they are allowed into the country?

[Answer] That would be very difficult. That's impossible even abroad. Checking for this disease takes time. It can't be done in a few minutes.

[Question] Besides AIDS, what other serious communicable diseases are there?

[Answer] Rabies is a serious problem. Almost 300 people a year die from rabies. People who contract this disease all die. There is no way to treat the disease.

[Question] In what age group are most of those who die?

[Answer] Most are young people about 20 years old. Most are from the provinces.

11943

CSO: 5400/4304



THAILAND

TB SPECIALIST ON TREATMENT, RATE OF INFECTION

Bangkok SIAM RAT SAPDA WICHAN in Thai 8 Sep 85 pp 54, 55

[Interview with Dr Suchat Daramat, the director of the Tuberculosis Division, Communicable Disease Control Department; date and place not specified]

[Excerpt] [Question] What is the TB situation like at present?

[Answer] The number of people with TB is still quite high. While the rate has fallen, the actual number has not fallen since our population has increased. Fifteen years ago, the population was 36 million. But this has now increased to 50 million. In the past, the TB rate was about 0.5 percent, which meant that about 150,000 people had TB. But now, while the rate has dropped to 0.3 percent, the population has increased to 50 million and so about 150,000 people have TB. That is, the actual number has not declined.

[Question] Are these 150,000 in need of treatment?

[Answer] Yes, there are now 150,000 people who need treatment for TB since they are in the communicable stage. That is, their sputum contains the TB bacteria and so they can spread the disease. If someone breathes in the TB organism, there is a chance that they will contract the disease. But not everyone who comes in contact with the organism will contract the disease. But there is a chance that they will. If we never come in contact with the organism, there is no chance of our contracting the disease. That is the important thing.

We need to treat all these 150,000 people. But there is no chance of treating all of them. We can treat about 35 percent, or approximately 50,000, of those known to have TB.

[Question] Why can't everyone who has TB be identified?

[Answer] It's very difficult. Actually, both sides have to cooperate. That is, both the person who wants to help and the person who needs help have to cooperate. If we are willing to help but they refuse to come forward, there is nothing we can do. They need to come forward. At present, the problem rests with the people.

If those who exhibited symptoms came to see us, things would be fine. But some people may not realize that they have the disease. When they cough, they think it is normal. They blame it on the fact that they smoke and that it is the rainy season. They buy medicine on their own, which may provide some relief. But then the disease builds up an immunity, and they become chronically ill. They stop paying much attention to it. By the time we see them, they are very sick.

Suppose that they don't come to us for 6 months or a year, during that time they can spread the disease to many people. The problem today is that we are slow in detecting the disease.

[Question] Why don't you increase efficiency?

[Answer] It's just not possible. If we did so, expenses would be very high. If we sent x-ray vehicles out to x-ray people, we would find about 0.14 percent of the people who are sick. One x-ray costs 10 baht, and there are other expenses, too. It would cost about 20 baht per person. If we x-rayed 1,000 people, that would cost 20,000 baht, just to find 14 people with the disease. That's a problem, isn't it? If those 14 would come to us, it would cost only 140 baht instead of 20,000 baht. We would have to see only 14 people. As for providing information, the mass media can help. The people will know what the symptoms are and will know that they can't ignore them.

[Question] What are the symptoms that indicate that a person needs treatment?

[Answer] One is a cough of unknown etiology that lasts more than a month. If a person has a chronic cough but does not have a cold or a sore throat, TB should be suspected. A second symptom is chronic chest wall pain. Hemoptysis is a clear sign of TB. But some people who cough blood do not go to see a doctor. Only when they begin coughing large amounts of blood do they go to a doctor. Other symptoms include general physical deterioration, malaise, fever, lack of appetite and loss of weight. If a person has these symptoms, he should get a physical examination.

Today, examination services have been expanded everywhere. There are 12 places subordinate to this division alone. That is, there is the one at the TB Division in Bangkok, and there are 11 other TB centers in other areas, including Chiang Mai, Phitsanulok, Khon Kaen, Ubon Ratchathani, Nakhon Ratchasima, Nakhon Sawan, Saraburi, Nakhon Sithammarat, Yala and Chonburi. Besides these, we are also coordinating things with other units. That is, other government units and community and district hospitals are doing things using the same system as us. We use the same medicines and do other things the same way. Thus, if a person comes to see us, we will check him and refer him to a center nearer his home so that things are more convenient and cheaper for him. We have expanded things greatly. We have made progress continually. The problem is that people must hurry to receive treatment. It's important that a person begin receiving treatment as soon as possible.

But an even more important problem than discovering those who have TB is the problem of getting patients to keep taking their medicine until they are fully cured. Because if they are not fully cured, the disease will become chronic.

[Question] Are people being adequately informed?

[Answer] There are many obstacles. If things seem to be all right, people tend to forget. This is a habit of people in general, including doctors (laughs). Because of their jobs, some people have to travel here and there. They forget. Sometimes people take a chance since they are no longer coughing up blood. They take their medicine for a month or two and think that they are cured since their symptoms have disappeared. There are many people who hold this mistaken idea.

Besides this, this is a social disease. Patients who are employees often try to conceal the fact that they have TB. If their employer finds out, he might fire them. There are many other obstacles that prevent people from taking all their medicine.

[Question] Are there many factory workers with TB?

[Answer] There are not too many today since the factories screen their workers. Before a person goes to work, he is sent to get an x-ray. Those who go to work at these places do not have the disease. They are physically healthy. The rate among factory workers is very low. Things are reversed. We tend to think that people who work closely in groups have a greater chance of contracting the disease. But their screening procedures are effective. Groups or slums do not present a problem if there are good screening procedures.

[Question] How would you classify people with TB?

[Answer] It is very difficult to classify people by occupation. Most are people who do heavy labor such as laborers and farmers. Farmers and others who work in the rural areas may have the disease because they have come in contact with the organism and have not received treatment.

Based on our latest survey, the incidence of TB is greater in the rural areas than in the cities or in Bangkok. The situation is now the reverse of what it used to be.

[Question] Isn't the environment a factor?

[Answer] The crowded conditions are no longer a cause. The disease is caused by a bacteria. Today, many people living in the rural areas have the disease. Today, approximately 80 percent of the people live in rural areas. About 15 percent live in urban areas, with about 9 percent living in Bangkok Metropolitan. An important factor today is the services that are available.

There are many services in Bangkok. There are private hospitals and clinics. Some districts have only one hospital, and there are districts that do not have even one hospital. There is only a health clinic. And think how many people there are who use those services and who have to travel a long distance. In Bangkok, there are clinics everywhere, and there are many hospitals. Look at the ratio of doctors. In Bangkok, there is one doctor for every several hundred people. But in the provinces, there are over 10,000 people for every doctor.

Services are an important factor. We are trying to expand our services for the people. This is a problem. Most of those with TB are poor people. They don't have the money to travel long distances for treatment. Suppose that a patient lives in Ayuthaya and that he has to come here to get medicine. He will definitely not get the medicine. He would lose time from work, and he would have additional expenses. People who live in Bangkok have an advantage. Going to a doctor doesn't take much time, and the bus fare amounts to only a few baht. We have to try to use the referral system.

[Question] Do you think that the service network is adequate?

[Answer] Based on the Fifth Development Plan, we have made great strides. Eighty percent of the district hospitals are cooperating well since this is a problem of the people. When we provide service to the people, we rely on these hospitals. They are both points and activists. But we supply them. For example, we provide information to them. If they don't know what the techniques or obstacles are, we hold meetings. We provide training courses. This is the duty of the division. The private TB associations help us. They hold courses. I serve as a specialist. We work together like this. We provide medicine and equipment. We help in making a diagnosis. We have to think of the people.

A hospital that does not cooperate with us will experience great difficulties. If a person who is coughing blood goes to them, they can't refuse to admit that person. They have to admit him. And the cost of staying in a hospital is much higher than taking medicine at home. It costs about 300 baht to stay in the hospital 10 days. But really he should stay in the hospital a month. But what can he do if he doesn't have the money to pay? If they don't give him medicine, he won't recover. In 2 weeks or a month, he will have to return. The hospital will have to spend more money.

[Question] Is there any way to reduce the TB rate?

[Answer] Today, our cure rate is higher. People who take the full drug treatment will recover. In the past, people did not recover because they did not take the full treatment. Today, things are more convenient. They can obtain medicines near their homes. The medicine is free. Officials are eager to help them.

Besides this last year the government provided us with a special medicine. A special budget of 15 million was used to purchase the medicine. This is a very effective medicine, but it has some serious side effects. We are using it only with people whom we can monitor closely. For example, we give it to people

who live near the clinic so that we can monitor them closely. We use it with people who have a high degree of infectiousness, that is, their sputum contains the bacteria. If they are not treated, they can spread the disease to many people. These are the people whom we treat. Also, the drugs are very expensive. It costs about 3,000 baht to cure a person. But since the government provided me with this drug, I am giving it to the patients.

[Question] Are expenses great?

[Answer] Very. I said that there are about 150,000 people who are in need of treatment. If we treat 50,000, we will have to spend about 150 million baht. The state can't bear the full expense. We have to make choices. We have to treat those who pose a danger to others. We are not playing favorites. If we can cure these people, we will prevent countless others from contracting the disease. When such people ride in crowded buses, they cough and spread the disease to many other people. Even in the hospitals, they spread the disease. We have to do something to stop them from spreading the disease.

In less severe cases, we use common medicines. These have few side effects. But it takes a long time to cure them.

[Question] Do you have any suggestions on how ordinary people can protect themselves?

[Answer] As for what people can do to protect themselves, adults don't have to do anything special. That is, they can keep themselves physically fit by exercising and eating properly and getting enough rest. They should not drink alcohol or stay out late at night all the time. That weakens the body and if they come in contact with the organism, they will contract the disease.

People who come in contact with the TB organism will not contract TB if there resistance is good. But they are at risk. They are at greater risk than people who have not come in contact with the organism. If they come in contact with the organism and they happen to be in poor physical condition, they are likely to contract the disease.

[Question] How often should people get a physical examination or chest x-ray?

[Answer] If possible, once a year would be great (laughs). Some say that that is not possible for them. Some get tired of coming for an examination so often and so they come every 4 or 5 years. When the tests come back negative, they become overconfident and feel that they won't get the disease. But sometimes people develop the disease during those 4-5 years.

If a person has any of the symptoms, he must get an examination. As I mentioned earlier, the four symptoms are a chronic cough, blood in the sputum, a chronic chest wall pain and general physical deterioration of unknown etiology.

[Question] Today, do many people die from TB?

[Answer] The number has declined greatly during the past 20 years. When I first went to work 30 years ago, the death rate was more than 80 per 100,000. Now, this is down to 11 per 100,000. Very few die. The reason for this is the drugs, not our skill. Today's drugs are excellent. They are very effective.

However, if we concentrate only on drugs, we may face a great danger in the future. That is, if people do not take the full treatment, they will not be cured. That is the problem. When they have symptoms, they take their medicine. But when their symptoms are gone, they stop taking their medicine. Such people will develop a chronic illness lasting 5-10 years. This poses a great danger.

[Question] Would you distinguish between the different types of TB?

[Answer] Actually, TB can affect all the organs. But the most dangerous form is pulmonary TB. The TB organisms may remain suspended in the air, which people then breathe into their lungs. Other organs can be affected, but this is not common. Our public health situation is very good today. Few people drink dirty water or eat contaminated food.

[Question] What is the trend for TB in Thailand?

[Answer] I think that the number of people with TB will decline. There are several reasons for this. First, our control rate is better. We are finding a greater percentage of those with the disease. Second, we now have better methods of ensuring that patients receive the full treatment. And if a person takes all the medicine, he will be cured and will no longer spread the disease. Third, the drugs are very effective.

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THAILAND

# ENCEPHALITIS OUTBREAK REPORTED

Bangkok BAN MUANG in Thai 24 Aug 85 pp 1, 3

[Article: "Outbreak of Encephalitis and Hemorrhagic Fever"]

[Text] Professor Prasoet Thongcharoen, the dean of the Faculty of Medical Technology, Mahidol University, stated that the number of cases of encephalitis is increasing at an alarming rate. The disease has spread to the central region and Bangkok Metropolitan. In the past, this affected mostly people in the north and northeast. The greatest number of cases are found among children ages 5 to 9 followed by children ages 10 to 14. It is thought that this will become a major public health problem in the future.

The disease is spread by mosquitoes carrying the encephalitis virus. Usually, the mosquitoes pick up the virus from pigs or horses, which are important hosts. The mosquitoes transmit the virus from these animals to humans. Symptoms include high fever, headache and drowsiness. The death rate is approximately 30 percent. Death usually occurs within 7-10 days. However, of those who survive, approximately 25-50 percent suffer brain damage. The person may become crippled, have deformities of the mouth, exhibit changes of mood and fly into rages. Some people may fall into a deep sleep. Adults may contract the disease, but it is more prevalent among children.

Professor Prasoet said that the reason why there are epidemics in the north and northeast is that the people in those areas raise large numbers of hogs, and they frequently keep them under the house. The mosquitoes that bite the hogs then transmit the disease to the people. People in the central region, such as in Nakhon Pat'hom Province and Bangkok Metropolitan, are now raising hogs, too. Thus, the number of people in the central region who have contracted this disease has increased. At present, there is no medicine to prevent or treat this disease. The Faculty of Tropical Medicine and the Microbiology Section at Sirirat Hospital, Mahidol University, are studying the use of interferron to treat this disease.

Besides this, the Military Medical Research Institute is conducting studies on a vaccine to provide immunity to this disease. At present, Japan, Korea and China are using a vaccine to prevent encephalitis.

Professor Prasoet said that this year, the outbreak of hemorrhagic fever is worse than normal even though this is just the beginning of the rainy season. It is expected that there will be more than 80,000 cases by the end of the year. One reason for the unusually large number of cases of hemorrhagic fever this year is that people have been encouraged to have places to store water. However, these places have been left uncovered and so mosquitoes, which transmit this disease, have bred in large numbers. Besides this, it has been recommended that the people put "abet" sand in the water jars in order to prevent mosquitoes from breeding there. But the people do not like to do this.

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THAILAND

ENCEPHALITIS OUTBREAKS IN NORTH, NORTHEAST REPORTED

Bangkok MATICHON in Thai 30 Aug 85 p 3

[Article: "Outbreak of Encephalitis in the North and Northeast"]

[Text] The director-general of the Communicable Disease Control Department has revealed that 101 people in 65 provinces have died from encephalitis. Almost 1,000 people have this disease. Chiang Rai has the most cases. A vaccine to treat the disease has been found, but it is expensive.

Dr Winit Atsawasena, the director-general of the Communicable Disease Control Department, Ministry of Public Health, discussed the encephalitis situation today. A report from the Epidemiology Division, Ministry of Public Health, states that this is still a serious problem in Thailand. Dr Winit said that based on reports from 65 provinces, there have been 986 cases of encephalitis, and 101 people have died. Most of the cases are in the north and northeast. The south, with only 70 reported cases, has the fewest number of cases. Chiang Rai has the largest number of cases, 103. This is followed by Chiang Mai, 83 cases, Nakhon Ratchasima, 72, Kamphaengphet, 63, and Loei, 51.

Dr Winit said that with the single exception of Nakhon Phanom Province, all the provinces in the north and northeast reported cases of encephalitis. He said that as compared with the same period last year, the number of cases has increased slightly this year. However, the nature of the epidemic remains unchanged. That is, most cases occur during June and July every year, which is the rainy season.

"Encephalitis still poses a great danger. A large percentage of those who contract this disease suffer brain damage, mood swings, paralysis, and difficulty in speaking and hearing. This places a great burden on those who have to care for these people," said the director-general of the Communicable Disease Control Department.

Dr Winit said that, in cooperation with the Virus Research Institute, Department of Medical Sciences, the Communicable Disease Control Department is testing a vaccine to treat this disease. A pilot project using a vaccine to prevent Japanese B Encephalitis has been underway since 1984. Students and infants in high risk areas, that is, Fang and Mae Ai districts in Chiang Mai Province, have been given inoculations. Good results have been achieved. But

at present, because the vaccine is so expensive, the ministry does not have any plans to inoculate people in general. Inoculations will be given only to people living in high-risk areas such as Chiang Mai, Uttaradit, Ubon Ratchathani and Nakhon Ratchasima.

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THAILAND

RABIES CALLED UNCONTROLLABLE, WORST AREAS NOTED

Bangkok DAILY NEWS in Thai 14 Aug 85 p 6

[Article: "Thailand Leads the World in Deaths From Rabies"]

[Text] Dr Mukda Tarutsayanon, the head of the Preventive Medicine Unit, Faculty of Medicine, Mahidol University, discussed the seminar on preventing and controlling rabies. He said that at present, rabies is uncontrollable. There are approximately 9 million dogs nationwide, but only 800,000 have received rabies shots. The rest are stray dogs. These dogs transmit rabies to humans. Besides this, cats can transmit this disease, too. There are about 900,000 cats. At least 300 people a year die from rabies. This is the highest rate in the world. And what is worst is that half of those who die are children ages 5 to 14.

During the past 5 years, there have been 10 provinces that have reported large numbers of rabies cases. First is Bangkok Metropolitan followed by Ratchaburi, Ubon Ratchathani, Ayuthaya, Chonburi, Samut Prakan, Sisaket, Khon Kaen, Nakhon Ratchasima and Kanchanaburi. We spend at least 100 million baht a year to prevent and treat rabies. That is a large sum.

Dr Mukda said that October to December is the period when the disease spreads. This is the time when dogs mate and so the disease spreads rapidly among the dogs. The dogs begin manifesting symptoms in March, which is the month when the greatest number of people are bitten by rabid dogs.

Everyone who contracts rabies dies since the disease attacks the brain and cannot be treated. Today, rather effective vaccines have been developed, such as the vaccines made from human and chicken cells. But they are expensive. Thus, the people should cooperate with officials by having their dogs and cats vaccinated every year. If people raise a large number of these animals, they should take them for a birth control injection. This will help control the animal population.

During the period 23-25 August, there will be a demonstration and seminar on controlling rabies in Thailand. This will be held at the Central Department Store at Lat Phrao.

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THAILAND

# EDITORIAL ON INEFFECTIVE ANTI-RABIES MEASURES

Bangkok BAN MUANG in Thai 16 Sep 85 p 4

[Editorial: "Laws and Practices"]

[Text] Mr Sakchai Satchasiri, a veterinarian with the Animal Disease Control Division, Bangkok Metropolitan, stated that a rabies act will be drafted and submitted to parliament in 1986. This draft act will require dog owners to register their dogs, pay a fee for each dog and have their dogs vaccinated against rabies each year. This will help control stray dogs. Any dog owner who fails to register his dog will be prosecuted. The purpose of this is to keep people from allowing their dogs to roam wild and to prevent the spread of rabies.

Mr Sakchai said that at present, there are 360,000 dogs in Bangkok Metropolitan. Of these, 220,000 have been vaccinated, which indicates that these dogs have owners. Approximately 30,000 have been destroyed. About 50,000 have not been vaccinated against rabies. Because dogs are mating and having puppies and because dogs have been abandoned by their former owners, the number of stray dogs is increasing. What is important is that it has been found that the spread of rabies is not limited just to the summer season as had been thought. Rabies cases occur throughout the year.

Actually, officials have been trying to control rabies for many years now without much success. The number of people who die from rabies is still high, and the number is increasing rather than decreasing. Also, rabies is not spread just by dogs. It can also be spread by cats. The Rabies Act should also include cats, which can carry the disease.

A surprising question is, Why hasn't a Rabies Act been promulgated before this? Rabies has posed a danger for many years. The reason why parliament has not dared promulgate a law to control the spread of rabies is that this has been viewed as a minor matter, but one that could affect the person who proposes the law.

As for whether the Rabies Act will achieve results, that depends on whether the officials responsible implement the law resolutely and on whether the people cooperate. In particular, the officials do not dare go and destroy or collect taxes on the dogs that live around the temples, which is where people

abandon their dogs for the monks to raise. But if the officials do not take resolute action, this will render the law meaningless just like many other laws that cannot be implemented.

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UNITED KINGDOM

# ALL BLOOD DONATIONS TO BE TESTED FOR AIDS VIRUS

London THE DAILY TELEGRAPH in English 14 Oct 85 p 6

[Article by David Fletcher]

[Excerpts]

**A**LL blood donations are to be checked for the fatal disease Aids (Acquired Immune Deficiency Syndrome) before being accepted for use in transfusions under a £2 million scheme starting today.

The scheme is being introduced by the National Blood Transfusion Service in an effort to stop any further spread of the disease which has already led to 114 deaths in Britain.

The Department of Health estimates that at least 10,000 people have been exposed to the Aids virus.

The number of deaths is expected to rise during the next two years, the Department has said.

At least 2,000,000 blood donations will be tested during the next 12 months at a cost of about £1 per test.

## Offered advice

At the same time, free tests are being made available through GPs and specialist hospital clinics for anyone who has reason to think they may have been exposed to the disease.

A spokesman for the DHSS explained that the tests were

being made available so that no-one would donate blood as a means of getting a blood test.

There is a small risk that contaminated blood might not be detected at an early stage of the disease and that infected blood could possibly slip through if donations were made by people who think they might have been in contact with Aids.

If a blood sample is found to be positive for Aids the donor will not be told until a second test has confirmed the result.

He or she will then be offered advice and counselling to explain the implications and the likelihood of developing a disease for which there is no cure.

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USSR

# SHORTAGE OF TICK-BORNE ENCEPHALITIS VACCINE IN SOVIET UNION

Moscow TRUD in Russian 20 Jun 85 p 4

[Article by G. Volovich under the rubric: "In Need of Prompt Resolution": "The Bite of the Tick: Shortages in Planning Production of Medicinal Compounds Leads to Trouble"]

[Text] A healthy 40-year old man arrived from Odessa Oblast for seasonal work in Siberia and found a job with a geological expedition. Three months later he returned home an invalid. Before that he could not even imagine that the bite of the tick would be a misfortune buried in the lush taiga.

With his hand shaking after the paralysis he had gone through, Viktor Alekseyevich Chernikov wrote to the editorial office, demanding that the guilty -- those who were responsible and still have not protected the worker from misfortune -- be punished. It turns out that when he went through his medical examination before joining the Nizhneudinsk Expedition, he was not even warned that an antiencephalitis inoculation was needed, although the detachment was at the base for 17 whole days before they left for the taiga. Moreover, the seasonal workers, including Chernikov, were not given special protective clothing, the excuse being that there was none in the warehouse. But how could such a thing have happened? Let us try to figure it out.

Inoculation against encephalitis is a long and exacting procedure. It is done four times, beginning in the fall, and the last injection is no later than a month before leaving for the forest. If the period is less than a month, then the organism has not yet developed immunity and the injected vaccine becomes a poison rather than a medicine: it strengthens the virus which has entered with the tick's bite. Did Chernikov know about this? Judging from his letter, no. But if in preparing to spend the summer in the taiga he did not worry about timely inoculations where he lived, there is only destiny to thank that the rayon paramedic indeed did not render a fatal service to him at the last moment.

As for the coveralls, the victim's indignation is entirely justified. Yes, there were no antiencephalitis suits in the warehouses. And only because in the last field season all of them -- 319 sets -- were distributed to workers and not demanded back. They were satisfied with monetary compensation; in

short, they were sold. This scandalous fact was evaluated in the ukase on the Irkutsk Geological Association: for failure to control the use of protective suits and for failure to take measures to prevent illness in the crews A. Bugayev, deputy chief (now already former deputy) of the expedition, was given a severe reprimand and V. Perfil'yev, the chief geologist, was given a reprimand.

It seems that Viktor Alekseyevich's claims have been satisfied and there is no occasion to return to the sad incident. Alas, the problem does not go away with this alone! Chernikov would not have needed the coveralls if the Nizhneudinsk Expedition had not closed its eyes to its own categorical order: "Hire absolutely no one who has not had the vaccination." And then the greatest thing that threatened the now-ill person would have been the loss of the cost of the trip from Belgorod-Dnestrovsk in Odessa Oblast to Nizhneudinsk in Irkutsk Oblast.

I foresee the bitter smile of those who organize the work of regular and temporary geologists, foresters, lumbermen, reclamation workers, miners, and representatives of other occupations related to the taiga -- they certainly know that upon leaving the city many workers have never set eyes on the vaccine. Here, for example, is a 10 May 1984 document verifying the Baikal party's (Irkutsk Geological Survey Expedition) readiness to leave. "Of the engineering-technical personnel, nine people have had antiencephalitis inoculations but the rest have not. . ." The rest were another 8 engineers and technicians and more than 50 workers. And did everything turn out all right after all? Far from it. It was in that very Baikal crew that last summer N. Demidenko, a geodesist 2 years older than Chernikov, died from a tick bite. He had also set out into the taiga without being inoculated.

Why? The polyclinic did not have the vaccine. Nor did the oblast sanitary-epidemiology station have it.

"Until last year this shortage did not exist," reported the station's chief doctor. "Our requests were fully satisfied. But then in 1984 the oblast was allotted only one-fifth of what was needed. We even had misgivings that it might have been a mistake and inquired by telegram to the Main Pharmaceutical Administration of the republic Ministry of Health. The answer that came was unambiguous: no, there was no mistake."

So medics had to be equipped with typewriters instead of syringes and, quoting the RSFSR Ministry of Health, announce throughout cities and villages: in spring 1984 the local population would not be inoculated against tick-borne encephalitis; only those arriving for seasonal work and members of construction brigades would be vaccinated. But as the story with V. Chernikov demonstrated, seasonal workers have no time for injections. And in places where they did have time -- where they lived, obviously the vaccine did not gush forth there either. And to this very day "persons" whose hiring was "absolutely" prohibited have been setting off for the taiga.

"We send out instructions and ourselves go to the expeditions and detachments on inspection trips," complains G. Larichev, chief technical inspector of the central committee of the geological survey workers trade union. "But there is



no guarantee that the prohibitions will influence the leaders. After all, the plan must be fulfilled!"

The plan must be fulfilled. The question is at what price. Every day people with rucksacks crowd around the entrance to the geological survey expedition, reading the "Help wanted" announcements. But there is no warning, even in small letters on the wall: "Only those who have been vaccinated!" There is none because in the fourth quarter of the past year -- the time the inoculations began -- not even a gram of the vaccine came to Irkutsk and this year's request was once again cut in half.

Is it not for these reasons that one does not hear appeals for caution and does not see posters with clear advice for those who are going by suburban trains and buses to the dacha area and suburban forest? For after all, according to statistics almost one out of two people who have suffered from encephalitis are precisely people who love to stroll in natural surroundings. For them, children and adults, the bite of the virus-bearing tick is not an occupational illness but rather an unforeseen misfortune. And whatever future impact the studies of medical scientists promise, it does not at all justify the present lack of a set of measures to reliably protect the labor and recreation of people from an insidious enemy of health.

From the editors. But where did the medicinal compound, which there used to be a surplus of, go? For explanations we turned to the Main Administration on the Production of Bacterial and Viral Compounds of the USSR Ministry of Health.

"A temporary shortage arose as a result of converting to a new technology for preparing the vaccine," said G. Khlyabich, the chief of the central directorate. "Because of this the production volume dropped: instead of the 4,576,000 doses requested by medical institutions last year, only 3,700,000 doses were produced. The lag behind requirements is now much less and, as we figure, it will be overcome by the end of the year."

In order to understand to what extent G. Khlyabich's optimism is justified, explanations are necessary. The antiencephalitis drug is produced in the country only by the experimental production facility of the Institute of Poliomyelitis and Viral Encephalitis of the USSR Academy of Medical Sciences and the enterprise of the Tomsk Scientific Research Institute of Vaccines and Serums of the USSR Ministry of Health; until recently the ratio was approximately 1:4. This is surely understandable. The main task of an academy scientific institution is after all to search for better means of protection against illness rather than mass produce compounds.

It was precisely here that 2 years ago there appeared a new concentrated vaccine which, according to the testimony of scientists, was better than the earlier one. Nonetheless, the capacity of the modified technological line enables the institute to produce only 200,000 doses of the compound per year -- one-fifth of what it was before. At the same time (it came out later) the Tomsk enterprise had received a new microbe culture for producing the vaccine. Reorganization there also had a significant effect on output volume.

Of course, promising new items must be incorporated. But this must be done on a planned and well thought-out basis. In launching introduction of the new technology, however, the USSR Ministry of Health did not concern itself with creating the needed reserves of vaccine and redistributing medicines from rayons in the country whose illness rates were relatively satisfactory to more dangerous rayons.

Medical care for the population is a special sphere where there can be no place for "hoping things will be all right" and making references to "objective" difficulties - the price for them is too high.

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USSR

#### BRIEFS

VACCINE SHORTAGE OVERCOME -- "The Bite of the Tick" -- this was the title of the article published on 20 June which spoke of scandalous mistakes in protecting the population from tick-borne encephalitis. The USSR Ministry of Health acknowledged the cited cases of unsatisfactory conduct of prophylactic and antiepidemic measures as true. As P. Burgasov, deputy minister, reported, the article was studied in detail at a conference in the USSR Ministry of Health with the chiefs of main administrations and representatives of the Ministry of Health of Russia participating and at the Odessa Oblast and Belgorod-Dnestrovskiy Rayon sanitary-epidemic stations as well as at stations in territories where tick-borne encephalitis is endemic. The main sanitary doctors of the republics, krays, and oblasts were ordered to carry out universal checks on inoculation of workers enlisted for seasonal and permanent work in the natural zones of this infection and to set up strict monitoring over supplying them with means of protection. When prophylactic measures are not carried out, those guilty are to be punished even to the extent of being discharged from the job. As a result of organizational and technological measures taken, P. Burgasov announced in conclusion, the demand for health care of the country, including the Russian Federation, for vaccine against tick-borne encephalitis will be fully satisfied in 1985 and subsequent years. [Text] [Moscow TRUD in Russian 14 Aug 85 p 2] 12424

CSO: 5400/1001

YUGOSLAVIA

BRIEFS

NO AIDS CASES--Belgrade, 23 August (TANJUG)--To date in Yugoslavia not a single case of AIDS has been diagnosed, stated Dr Nikola Georgievski, assistant to the president of the Federal Committee for Labor, Health and Social Welfare and leader of the section dealing with contagious diseases and sanitary medicine, responding to a report of the appearance in our country of the virus that causes this pernicious disease. He referred to the expert opinion of the federal commission on AIDS, according to which individuals with seropositive test results, in other words with antibodies to the AIDS virus, are not considered to be afflicted with the disease. AIDS, therefore, has not arrived in Yugoslavia, but because all of the so-called high-risk, groups are present in our country, among them homosexuals, hemophiliacs, and drug addicts, says Dr Georgievski, the possibility that the disease will appear here is being taken seriously. For this reason, according to Dr Georgievski, measures have been taken in this country to prepare the health services to eventually confront this disease [Text] [Sarajevo OSLOBODJENJE in Serbo-Croatian 24 Aug 85 p 3]

CSO: 5400/3009

ZAIRE

BRIEFS

AIDS ORIGIN DENIED--Kinshasa--Zairean medical experts have found conclusive proof that aids did not originate in Zaire, public health minister Kalembe Mushobekwa has said. Speaking to journalists after visiting a local Chinese-built hospital, he did explain the evidence but said it would be presented at an international health conference in Brussels in November. It is "up to Zaireans to speak about (aids in) Zaire," Mushobekwa said. "We will demonstrate with hard facts that the disease did not originate here." Although no official figures are available medical sources said hundreds of cases of aids (acquired immune deficiency syndrome) had been detected in Zaire. Some European and US experts have speculated that the disease, for which there is no known cure, first appeared in Central Africa. According to the theory it was transmitted by animals to humans through bites or meat consumption. The Central African Republic earlier this month denied that it had a large number of aids victims, saying that the ratio was half that of other countries. Its capital of Bangui will host a World Health Organisation (WHO) sponsored conference next month on how to check the spread of the disease in Africa. [Text] [Blantyre DAILY TIMES in English 2 Oct 85 p 7]

SPASTIC PARALYSIS SPREADING--At a press conference, Dr Kabeya Duda, chief medical officer of the Panzi Rural Health Zone, which is located in the Kasongo-Lunda area (Bandundu region), announced that measles has been completely banished from his bailiwick. That victory, he added, was won by vaccinating the entire population and by the dedication of the medical staff. However, said the doctor, a new epidemic, this one of spastic paralysis, is spreading fast from its start near Feshi, in the Kwango sub-region. The disease, which sets up extreme muscle contraction in the lower limbs, is believed to be bacterial in origin. That belief was confirmed by a group of neurologists who recently visited that part of the Bandundu region. The group included Prof Carton of Louvain University, as well as Professors Martens and Kazadi of Kinshasa University. Studies in depth to determine the origin of the disease are continuing now at Louvain University in Belgium. Pending discovery of an effective therapy for spastic paralysis, said Dr Kabeya Duda, the program in his zone of health for this 7-year period will be devoted to wiping out malaria and diarrhea and tending to general health improvement. [Text] [Kinshasa ELIMA in French 28 Aug 85 p 3] 6182

AUSTRALIA

TICK THREAT, LOSS OF TREATMENT SUBSIDY ANGERS CATTLEMEN

Sydney THE SYDNEY MORNING HERALD in English 5 Oct 85 p 2

[Article by Greg Roberts]

[Text] The vast cattle herds of south-eastern Australia could be severely reduced by an outbreak of cattle tick fever, according to farmers living in the Tick Quarantine Area near the Queensland border.

Thousands of beef and dairy farmers are angry with the State Government for abandoning its 80-year policy of paying for compulsory cattle dips to keep ticks out of NSW.

Protest meetings in Casino, Kyogle and other towns have called for the resignation of the Minister for Agriculture, Mr Hallam.

More than 1,200 people attended one. Many more have signed petitions, and 500 people jeered Mr Wran at a recent function in Lismore.

But Mr Hallam says the farmers are self-centred and the Government can not afford to continue paying for the scheme, estimated at \$10 million a year and rising. He said that fears of a fever outbreak were groundless.

The fever is a malaria-like disease which attacks the blood of the animal through a parasite. It entered Australia from Asia in 1872 via the Northern Territory, reaching the NSW border in 1902 and wiping out two-thirds of Queensland's cattle on the way.

It has been held at bay ever since, with only a few minor outbreaks in NSW.

In Queensland, cattle have developed a degree of immunity from years of exposure to the tick, and vaccines are used with some success. Even so, the fever continues to cost the industry up to \$200 million a year.

Under the changes now being phased in, dipping will no longer be compulsory in NSW and the farmers have to pay. The Government is handing over control of the 1,400 dips to the 6,500 farmers, and some are refusing to co-operate.

"You can think of it as a bottle of ticks up there and we are the cork," says a Kyogle cattleman, Mr John Harris.

"That cork's been kept in place by what we've had for decades. Now the Government has pulled it out and that can only spell disaster."

The chairman of the Tick Action Committee, Mr Jim O'Brien, said the issue had national importance.

"What we've been doing is protecting the entire industry south of the border. If ticks get through here they will soon be through the rest of the State and in Victoria and South Australia. The herds could be decimated."

Mr Hallam said government officers would inspect herds every year. Any property with ticks would be quarantined and farmers would have to dip their cattle under supervision.

"If they don't, they will go to court," he said.

"The cost would have reached \$25 million by the 1990s. My budget is only slightly more than \$100 million.

"People would have been screaming for my head for spending that money. I would have had to drastically reduce other services which the community is entitled to."

The Government's changes conflict with a comprehensive inquiry into tick control in 1980, which recommended that compulsory dipping continue.

That view is shared by a majority on the Government's Board of Tick Control.

A farmers' representative on the board, Mr Eric Muller, said that the former chairman, Mr Bernie Doyle, was "moved sideways to a desk job" because of his opposition, and that recent meetings of the board were closed to the press.

"There's hardly any point in

being on it, except to keep us informed of what they're up to," Mr Muller said. "The department [of Agriculture] just ignores us if they don't agree."

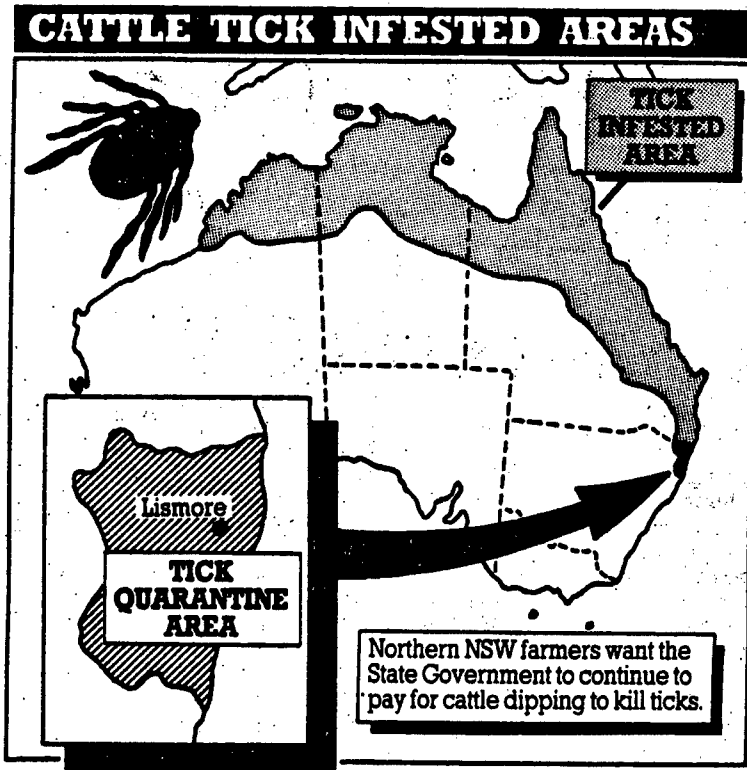
Mr Bob Weaver, a supporter of the Government's policy, was appointed chairman in April.

He said that the Government has already compromised by agreeing to retain a zone along the border 20 kilometres wide, in which compulsory dipping would continue.

"I think that meets the concern of people worried about ticks moving over the border.

The farmers were backed by the executive director of the Cattle Council of Australia, Mr Bob Coombes.

"The Government is penny-pinching," he said. "The people in that area should receive every encouragement. If ticks take hold there, you only need an exceptionally wet season for them to spread south and west."



/8309

CSO: 5400/4320

CANADA

# ANTI-RABIES VACCINE-LOADED BAIT DROPPED BY PLANE

Ottawa THE CITIZEN in English 25 Sep 85 p A5

[Text]

GODERICH (CP) — To the every-second tap of a metronome, research technologist Sarah Fraser pumped liver-flavored wax sponges through a short tube in a Cessna aircraft Tuesday in North America's first air drop of a live liquid rabies vaccine.

The operation, which involved two aircraft flying about four circuits each to dump 12,700 baits over 530 square kilometres in southwestern Ontario, is a field test to determine whether the Ministry of Natural Resources has found an effective way to get rabies vaccine to wild foxes.

If effective, the technique will immediately go into full-scale application in high-risk fox rabies areas in Ontario.

Wild foxes and skunks are responsible for 96 per cent of all rabies cases in wildlife and more than two-thirds of all rabies cases in Ontario.

"I am very disappointed with the vaccine that it is not effective on skunks," said Dr.

Charles MacInnes, the ministry's director of wildlife research at Maple.

The vaccine was made by Connaught Laboratories in Toronto from live rabies vaccine and modified so it wouldn't cause rabies.

It will immunize foxes, but it isn't effective on skunks and the ministry is warning owners of pets that it will not immunize their animals.

Ontario's search for a way to reduce rabies in wildlife is costing about \$1.5 million, but the disease costs \$16 million to \$19 million a year in medical and veterinary costs.

The Goderich area has become the testing ground for airborne vaccine drops primarily because trappers in the area have been extremely helpful, said MacInnes.

Selected trappers will collect fox blood samples from mid-October to mid-November.

"If the public finds the baits, we ask that they leave them be," said MacInnes.

"This is the first time in North America that vaccine has been put in the field."

/13104

CSO: 5420/37



COLOMBIA

FOOT-AND-MOUTH VACCINATION PROGRAM HALTED FOR LACK OF FUNDS

Bogota EL ESPECTADOR in Spanish 24 Aug 85 p 3-B

[Article by Raul Osorio Vargas]

[Text] The foot and mouth vaccination program has been halted for lack of funds and the Colombian Agricultural and Stock Raising Institute (ICA) undeniably needs greater economic support to fight the disease, Raul Londono Escobar, manager of Colombian Veterinary Products Company (VECOL), has declared. Eleven new outbreaks of "A Sabana 85" have been discovered in Chiquinquirá, six municipalities are affected in Antioquia and the ICA in Tolima has quarantined the whole department as a preventive measure.

Mr Londono Escobar maintains that priority needs to be given urgently to the control of foot and mouth disease because it affects not only stock raisers but also Colombian consumers, owing to the resulting increases in the prices of meat and milk, foods of great importance in the family diet.

"Priority must be given to such a campaign at all levels. In this way, we can fight and control foot and mouth disease," he stressed.

New Vaccine

In conversation with EL ESPECTADOR, the manager of VECOL said that the vaccine to fight "A Sabana 85" is ready and 1,200,000 doses will enter the market on 6 September. He pointed out that his company had sold the 460,000 doses that were allocated to the Sabana (Savannah) of Bogota and added that many stock raisers were still making judicious use of the traditional vaccine and achieving 80 percent success in protecting their herds, "When the animals are moved about and vaccination is at a low level, the outbreaks increase, but, if controls and the necessary sanitary measures are taken and animals are vaccinated, the results are completely satisfactory," he stressed.

He indicated that, at the last meeting of the National Committee to Fight Foot and Mouth Disease, it was shown that 11 new outbreaks have been discovered in Chiquinquirá, where preventive vaccine coverage is only 9 percent.

## Tolima

The management of ICA's Region 6 (Tolima, Huila, Caqueta and lower Putumayo) has declared a preventive quarantine in the Department of Tolima in order to face up to the imminent danger posed by some neighboring regions that are affected by the "A Sabana 85" virus. By means of its decree number 314, the organization has prohibited the movement of cows, goats and pigs coming from Magdalena Medio (middle Magdalena), Santander del Sur (Southern Santander), Llanos Orientales (EASTERN Plains) and Sabana de Bogota (Bogota Savannah). Furthermore, it was decided that the transportation of animals from middle Magdalena to Bogota and Manizales via (necessarily) northern Tolima will take place only from 6:00 am to 12noon and under the strictest sanitary controls. The ICA resolution authorizes the movement through the department of fattened animals, forbids the entry of animals from quarantined areas and will be in effect for 30 days, subject to extension depending on the situation at the time.

## Antioquia

In Antioquia, the number of municipalities affected by new outbreaks of foot and mouth disease has reached six, the last having been discovered in Chigorodo, according to the department's health authorities. Likewise, they announced the suspension of cattle fairs at Sonson and Abejorral, as well as the movement of cattle toward the western part of the department and Uraba in Antioquia. The ICA officials announced that, in the face of the sickness' sharp onslaught, the municipalities of Puerto Berrio, Puerto Nare, Sonson, Puerto Triunfo, Abejorral and Chicorodo, as well as the areas of La Danta and San Miguel, will remain quarantined.

12336

CSO: 5400/2096

COLOMBIA

POLITICAL POLICY SAID EXACERBATING FOOT AND MOUTH EPIDEMIC

Bogota EL ESPECTADOR in Spanish 26 Aug 85 p 2-A

[Text] When we said in this column the day before yesterday that, given the importance of its mission, the Ministry of Agriculture ought to be the top ministry, obviously, in view of the many vital aspects of its responsibility, we did not exhaust the theme. Thus, it is necessary to deal today with the sad and greatly threatened condition of the country's livestock, which has been hurt badly--hopefully not mortally--by foot and mouth disease, with regard to which the most serious aspect, in every sense, is the government's inability to prevent its spread to the entire country--evidence that has not been refuted of scandalous negligence and reprehensible indifference. And as a result the production of meat and milk, two basic foods of which there has always been too little, has dangerously decreased.

In our country, the development of stock raising has had many ups and downs. In 1950, 1.4 million head of cattle had to be sacrificed; in 1983, this figure rose to almost 3 million and there were half-a-million fewer than in 1981; this can only be explained by the erroneous policies followed with regard to both promotion of the industry and commercialization inside and outside the country. It was the result of excessive killing of female animals, smuggling of animals to Venezuela and the fateful effects of foot and mouth disease, not to mention the disincentives introduced into a key industry, important both for health and the prosperity of everyone, by tax levels conceived by desk-bound bureaucrats and by neglect of the countryside and its problems.

Insofar as offensive deception of the populace is concerned, it would be hard to find a worse example than that of the successive announcements that foot and mouth disease is being defeated. Far from this being the case, a really chaotic health situation has been created--a situation that has grown worse since last May, when the last outbreak appeared in Sopo, overflowing the confines of the Savannah and of Boyaca. A new vaccine was then introduced, which was said to be more effective; several regions were placed under quarantine, controls over the movement of animals were instituted and fairs, exhibitions and markets were prohibited. But all this was useless, since now the plague has spread to the Eastern Plains, middle Magdalena and the Atlantic coast and, moreover, the little exporting that we were doing has been paralyzed.

As if this were not enough, according to official statistics, the immunizing efficacy of the traditional vaccine is only 40 percent and it is applied to only 44 percent of the animals, since, whether for whimsical reasons or lack of confidence or lack of coercive measures--this last being a serious factor in a matter relating to defense, which should be drastic, against something as essential for health and the fight against need--the stock raisers do not use it. The losses suffered by the stock raising industry, which may be as great as 2 billion pesos to date, threaten to reduce to its most rudimentary state this activity that not long ago promised to be one of the principal generators of foreign exchange. Today, of course, this possibility does not exist, both for health and economic reasons, and this at the very time when the country, which is so disturbed, most needs it. No more data need be adduced to demonstrate the incredible effects of an official policy that has been a total failure, since it was supposed to wipe from the map of Colombia this sickness that has been endemic for a long time reaching epidemic levels far too frequently.

Other nations on the continent have fought it successfully. It has been said officially again and again that it would take 20 billion pesos over a 20-year period to defeat this plague and that the money is not there. It is a minimal amount in comparison with what the stock is worth or, more crudely, what it was worth. Here we see the vast difference between words and deeds that require decisive and immediate action. Every one knows that the solution is to vaccinate and isolate the sick livestock, sacrificing them if necessary. But this is not being done.

If the official vaccines do not work, the right ones ought to be imported, however painful it may be to recognize the failure and that everything done up to now has been ineffective. The flowery literature about the peace in the countryside is shown to be hollow when one examines this devastating picture. The livestock has been built up over the years by thousands of peasants, providing a living in some cases, but more often barely enough for subsistence. Our indignant appeal to the country, government and Congress is that they wake up while there is still time and face up to what threatens to become, within a short while, a real catastrophe.

12336  
CSO: 5400/2096

COLOMBIA

BRIEFS

FOOT-AND-MOUTH OUTBREAK CONTAINED--The ICA [Colombian Agricultural-Livestock Institute] has reported that a quarantine has been lifted in Middle Magdalena, Cundinamarca, and Boyaca. According to technicians, this comes as a result of the containment of foot-and-mouth disease outbreaks in those regions of the country. Benefited municipalities will again be able to organize livestock fairs that were prohibited to prevent the spread of the disease among cattle. [Text] [Bogota Television Service in Spanish 1730 GMT 15 Oct 85 PA]

CSO: 5400/2010

FINLAND

CANINE DISTEMPER EPIDEMIC THREATENS FUR INDUSTRY

Helsinki HELSINGIN SANOMAT in Finnish 8 Oct 85 p 6

[Article: "Millions in Losses for Fur Farmers: Gull Flocks Suspected as Spreaders of Canine Distemper"]

[Text] Juuka (HS) -- Canine distemper, brought from Canada along with imported foxes is expected to cause losses in millions of markkas to fur farmers during the next few months in the provinces of North Karelia and Pohjanmaa. The sale of fur-bearing animals is already slowing down, and possible quarantines to be ordered for the fur farms will further confound business transactions.

It was confirmed during the weekend that the lethal animal disease, first noticed at the quarantine station for the imported foxes, has spread at least to two nearby fur farms in Juuka. Forty-five valuable animals have died on these farms alone. Altogether canine distemper has killed well over one hundred farm foxes in a few weeks.

The disease is also suspected of having escaped from the quarantine stations in Pohjanmaa, which, in addition to North Karelia, imported foxes from Canada during the summer. Extensive preventive inoculations of fur-bearing animals have been started in both provinces on account of the disease. Outsiders have been forbidden visits to the farms. Dog owners are also advised to inoculate their pets.

On Monday the fur farmers of Juuka mulled over the disease situation at the meeting room of the township council. At the same time ways of facilitating the battle of prevention were considered so that the epidemic could be halted within these bounds. According to the fur farmers, the liability for the losses belongs, without doubt, to the Canadian sellers of the foxes, or to the Canadian government.

In the opinion of managing director Vaino Hernesniemi, chairman of the Savo-Karelian fur farmers association, the liability for the whole dispute lies with the Canadian government, because the officials in question gave the Finnish buyers certificates guaranteeing the good health of the 1000 imported foxes. Hernesniemi is afraid that the disease epidemic will cause great losses to the entire fur farming industry in Finland.

"The Gull Problem Must be Brought Under Control"

"The worst in the matter is by no means the death of tens or even a hundred foxes, but the possible halt of all animal sales. We already had to cancel the large auction planned for Juuka. In the same way smaller sales of breeding foxes are now being canceled every day." Hernesniemi estimated, "At Juuka alone the losses will soon be counted in the millions of markkas."

Hernesniemi, who manages Juuka's largest fur farm, Turkis-Sampo, suspects that the distemper had escaped from the quarantine pen at the center of the pen area by means of insects or birds. In his opinion possible spreaders of the disease are the gulls which in springtime circle in flocks up to ten thousand strong near the pens.

"Now in the fall there are far fewer gulls in the pen area, but they are a real bother and a threat. We should really try to get rid of these harmful birds, if we intend to keep animal diseases in check."

Juuka's veterinarian, Jari Grondahl, has been forced to work overtime from early morning until late at night during the past weeks because of the distemper epidemic. The inoculation of tens of thousands of animals will stop the further spread of the disease in his opinion. We will still have to wait a week before the effect of the inoculation can be seen.

Chief Inspector Saara Reinius of the veterinary department of the agricultural and forestry ministry says that the ministry will be considering possible quarantine steps for the fur farms in the next few days. The ministry will get an evaluation of the disease situation from the state veterinary department on Tuesday.

12989

CSO: 5400/2504.

MOZAMBIQUE

RAISING OF SMALL LIVESTOCK NEAR CITY PROHIBITED

Beira DIARIO DE MOZAMBIQUE in Portuguese 4 Oct 85 pp 8-9

[Text] "No one should raise hogs on the outskirts of Beira without permission from the Provincial Veterinary Service, nor should they inside the city. Such activity is banned," as the reporter from DIARIO DE MOCAMBIQUE was told by livestock technician Pinto Ribeiro, chief of that service in the Sofala Directorate of Agriculture.

Although it was established in 1981, a time when another outbreak of African hog cholera occurred in Beira, this regulation has been violated by "clandestine" breeders, and there have even been some instances "known to us," as that official admitted.

The fact that, 4 years after the occurrence of this disease, in the capital city of Sofala Province, the aforementioned regulation is still in effect is due (according to Pinto Ribeiro) to its nature as a livestock health measure of a preventive type, "even though the plague has already gone."

He explains the situation in greater detail: "Hog raising is an activity which requires stringent observance of certain conditions. That is why we have to inspect the future site on which it is intended to start this activity, to find out whether it really meets the requirements.

"As a rule, the facilities have to be made of masonry and provided with a cleaning system, with ditches for the collection and removal of excrement."

The subject of our interview explained: "It must also have a foot bath, a place for people to pass through before they enter the hog raising area, so as to eliminate any viruses that they may possibly be carrying on their shoes. In addition, a wheel-washing system is installed to disinfect the tires of vehicles."

However, in view of the current cement shortage, a minimum of conditions is required, which must necessarily be met. For this reason, individuals who wish to become engaged in this activity must contact the Veterinary Services. Pinto Ribeiro added: "We have to become acquainted with them and inspect the future breeding site."



## The Problems of Raising Hogs at Home

It is well known that, usually, where one dwelling is finished, another one is begun immediately, in the suburbs and certain areas on the outskirts of the city, which are the sites on which the family hog raisers are located.

In most instances, they are not concerned, or else they fail to meet the most fundamental animal health requirements for engaging in this activity.

Furthermore, it is the neighbor who finds himself disturbed by the noise and the unpleasant odor of the hogs; it is the excrement that is left exposed to the open air; and, in short, the danger of easy infection and spread of disease, added to the fact that the public health itself is threatened by this type of breeding.

"There is one very important point to mention in connection with family breeders. As may have been noticed, they have black hogs of the rustic or 'landim' type, as they are known by many people. They are short in height and weigh less than those of the industrial types raised by the state and private sectors."

The hogs in the latter sectors, which are white, are of breeds that reproduce with greater ease than the others, and are of larger size and weight; hence they provide more meat.

The problem posed (according to the livestock technician's explanations) is that the "landim" breed can be a great vector for transmitting African hog cholera to hogs of a different type, which are more sensitive.

Pinto Ribeiro added: "It so happens that the rustic hogs are apparently resistant to the virus of this disease, but they very readily transmit it to the others, which are sensitive."

Therefore, it becomes obvious that hog raising must necessarily include authorization from the Veterinary Service; because if the people who start this activity do not abide by the regulations established for this purpose, they will jeopardize all the breeding in the city, and could even affect other areas.

## What African Hog Cholera Is

In its most common form, African hog cholera is an epidemic caused by a virus, which is highly contagious, hyperacute and pyretic. It is typified by pronounced hemorrhages in the internal organs, reddish blotches on the skin and a mortality very close to 100 percent in the affected area.

However, in the areas where it becomes endemic, there may be a reduction in the mortality and an increase in the frequency of subacute and chronic infections. Its presence can only be determined with absolute certainty through laboratory analyses and tests.

To date, no vaccine or treatment has been found for this disease. For this reason, within a few days it could decimate a large number of hogs.

Pinto Ribeiro told us: "There is one country which lost 400,000 hogs on just one occasion, because of the hog pestilence. Some died from the epidemic itself, and others had to be slaughtered even before being stricken by it to avoid a greater spread of the disease."

The infection can be caused in various ways. "It can come from the air, vehicles, sawdust, workers from stricken hog enclosures, certain types of ticks, rats, objects which have been on infected sites, etc.

Combating it requires the adoption of a series of immediate measures. "All the hogs from the infected hog enclosures must be killed, burned and buried.

"All the hogs within a radius of 2 kilometers of the affected site are also immediately slaughtered, because this is another of the methods known to curb the spread of this disease."

In the event that it is proven through analyses that those hogs have not been stricken by the pestilence, their meat may be consumed; but otherwise they must be burned and buried.

Other action to combat this epidemic include the establishment of barriers at all the city's points of entry and egress, so as to prevent the access or passage to other locations of pork or its by-products from animals which did not have to be slaughtered even before having been stricken, to prevent the spread of this disease.

According to statements made by our source, the city of Beira has already had at least two outbreaks of African hog cholera, which led to the death of thousands of hogs.

#### Campaign Against Unaccredited Breeders

The Provincial Veterinary Service will soon start a vast campaign in the city of Beira against the unauthorized raising of hogs.

The offensive will also include those who raise small-sized animals, such as ducks and chickens, on sites considered to be unsuitable.

Pinto Ribeiro cautioned: "People should not engage in raising animals on porches, in servants' quarters, in garages or in dumps."

This activity should be carried out in pens which, according to our source, means that animals of small species must be raised in houses with a back yard.

That livestock technician pointed out: "It is also advisable to inform people that they should not allow their animals to invade their neighbor's back yard or roam about on the street, because we all know the upheaval that this causes."

However, in the case of those who raise hogs without permission from the DPA's Veterinary Service, or chickens, ducks and other animals of small species on sites defined as inappropriate, penalties have been established.

In both instances, according to Pinto Ribeiro, "We shall slaughter the animals and sell the meat to institutions such as child care centers, homes, barracks and prisons, returning to the state the money resulting from the transaction."

In addition to this, the respective owners will be subject to penalties to be imposed by the Veterinary Service.

#### Technical Assistance and Combating Newcastle Disease

The DPA's Provincial Veterinary Service is set up in two units. It has personnel assigned to the office sector and to the provincial veterinary laboratory which, in the chain of command, comes under this service.

That official noted: "We have minimally qualified personnel and we render assistance, insofar as we are able, to all the sectors engaged in breeding. What we sometimes lack is the capacity in the form of human and material resources to support them suitably."

By way of example, he mentioned the fact that, for the entire Sofala Province, there are only two veterinarians, one Mozambican and another foreign one. The latter is about to leave the country, according to information from Pinto Ribeiro.

Nevertheless, neither one of them belongs to the Provincial Veterinary Service (SPV), and hence "every time we need their assistance, we have to contact the respective work sites."

It is noteworthy that the native doctor is working in an enterprise located far from the city of Beira, in a district.

Moreover, many chickens have died in this city this year, attacked by Newcastle disease, which could have been avoided if they had been vaccinated.

Pinto Ribeiro noted with regret: "We sponsor vaccination campaigns twice a year on established sites, in coordination with the neighborhood mobilization groups, but few people attend."

2909

CSO: 5400/21

MOZAMBIQUE

RABIES, NEWCASTLE DISEASE VACCINATIONS CONTINUE IN MAPUTO

Maputo NOTICIAS in Portuguese 19 Sep 85 p 2

[Text] Over 66,000 animals, including dogs, cats and chickens, were vaccinated during the past few days in Maputo, in the course of the campaign to combat rabies and Newcastle disease that has been under way since May in the nation's capital.

The campaign, which operates according to the house-to-house system, is aimed at combating this type of disease, enabling the Provincial Poultry Raising Directorate agencies to maintain control over the vaccinated animals.

According to a source from the DPA's Provincial Veterinary Services, 66,754 animals have already been vaccinated; however, this number is expected to increase as the campaign continues.

Our source explained that, at the present time, the vaccination work is being carried out in the Mafalaia district, where 42 cats, 88 dogs and 1,714 chickens have already been vaccinated.

The official from the Provincial Veterinary Services remarked: "We expect to finish the work in the Mafalaia district this week, and then we shall go on to the urban development area."

Discussing the establishment of fixed stations for vaccinating animals in certain residential areas of the city of Maputo, the subject of our interview noted that this would not occur until after the vaccinations have been completed in the urban development district.

He added that the establishment of the stations would be done on a priority basis in the districts with the greatest population density, "where we anticipate the presence of many animals."

Our source remarked that, at the present time, the vaccination campaign has already reached nearly half the city of Maputo.

Commenting that the anti-rabies vaccination work in the Mafalaia district had originally been scheduled to end on 13 September, the official from the

Provincial Veterinary Services claimed that, nevertheless, this proved to be impossible, because of the organizational problems in the district, which hampered the brigade's work.

2909

CSO: 5400/21

SOUTH AFRICA

HUNDREDS OF RIVER FISH FOUND DEAD

Johannesburg THE STAR in English 8 Oct 85 p 6

[Article by Karen Bowes]

[Text]

Hundreds of fish were found dead in the Crocodile River in the Swartkops-Elandsdrift area outside Krugersdorp at the weekend, and others are still dying in what is feared to be contaminated water.

Residents fear an epidemic if the water contains toxic chemicals.

Apart from the fish, there is much wildlife in the area and domestic animals.

Water from the river is also used to irrigate crops on surrounding vegetable farms.

Worse still is the fear for human lives — on Saturday, groups of black farm labourers were seen collecting the fish to take home and cook.

A spokesman for the Department of Water Affairs in Pretoria, Mrs M P Oliveira, said yesterday that the matter was being investigated, but the nature of the problem had not been identified yet.

Water samples were being taken to Onderstepoort for examination and the dead fish would be examined.

"It can be anything," she said. "Pesticide sprays may have been dumped, or someone may have tipped a tin of something in the river. We have no idea at this stage what the cause is, and nobody should be eating the fish."

YELLOW FISH

Effluent from a nearby sewerage plant which flows into the river is also being investigated.

The Star visited a spot in the Swartkops area yesterday and found hundreds of yellow fish, barbel, carp and bass floating on the surface of the water or lying on the river bed.

Other fish, barely alive, were gasping for air at the surface and trying to get out of the water.

Some of the dead fish were more than 30 cm long.

/9274

CSO: 5400/22

**SOUTH AFRICA**

**BRIEFS**

**DISEASE KILLS CHICKENS IN NATAL--Durban--**An estimated half a million chickens have died in Natal in a widespread flareup of poultry disease which farmers and researchers are fighting to control. It comes as chicken producers are being squeezed between rapidly increasing production costs and decreasing selling prices. The death toll is revealed by the Veterinary Research Laboratory at Allerton in Pietermaritzburg. It estimates that during the past winter between 10 and 12 percent of broiler chickens have died. Natal chicken production is estimated at two million chickens a month. "The past six months has been a difficult time for poultry producers in Natal and there appears to be little prospect of commercial improvement in the immediate future," according to a report from the Department of Agriculture. [Text] [Johannesburg THE CITIZEN in English 23 Oct 85 p 15]

/9274

CSO: 5400/22

ZIMBABWE

METHODS FOR ERADICATING QUELEA PEST EXPLAINED

Harare THE SUNDAY MAIL in English 13 Oct 85 pp 1, 2

[Text] The quelea bird, estimated to have cost some \$4 million in damage to Zimbabwe's winter wheat and barley crop this year, could become a delicacy on the tables of Europe's top gourmet restaurants.

Initial feasibility studies have shown that the tiny bird, no larger than a matchbox once they are plucked and gutted, can fetch the equivalent of about 40c in foreign currency from delicatessens and restaurants in France and Mediterranean countries where wild fowl are a sought-after dish on the national menu.

In the last four months more than 120 million quelea have been killed in about 80 aerial and tractor-blown spraying operations mounted by the Department of National Parks and Wild Life Management to protect Zimbabwe's wheat and barley crop.

On the local market quelea collected by rural communities and farm workers sell for anything between 2c and 12c. They are roasted over a fire to char off the feathers, boiled or dried and are eaten with relish and sadza or as a savoury snack sometimes in local bars.

National parks ornithologist Dr Peter Mundy, who has been leading the quelea control campaign, said this year Zimbabwe had experienced the heaviest quelea outbreak recorded during the last 15 years mainly because of the prolonged rains which followed three successive years of drought. The rains brought out an abundance of annual grasses whose seeds are the quelea's natural food.

The quelea has a 35-day reproduction cycle from nesting to fledging its young and this enables it to increase its population five-fold in its prolific breeding season from January to April. It is estimated that the quelea population in Zimbabwe this year increased from about 100 million to more than 500 million about a quarter of which have now been killed by spraying operations.

Another factor in this year's outbreak was the migration of the birds from Botswana, Zambia and Mozambique, in search of food when annual grasses there are no longer seeding.



Without the grass seed the quelea turns to winter crops to survive although wheat and barley seeds are much larger and are not the bird's preferred food. Zimbabwe has a much larger area of irrigated winter crops--about 42,000 ha under wheat and 5,000 under barley--than the neighbouring countries.

This year the total winter crop is estimated at about \$80 million. A record crop was grown this year. In one 10 ha area of barley with a potential yield of 70 tonnes quelea destroyed about 35 tonnes half the crop, in five days. "The quelea is the modern-day locust," said Mr Mundy.

The average damage to winter crops throughout the country is expected to be around 5 percent, an overall loss of about \$4 million to the national economy. To date the spraying has cost National Parks \$140,000, five times the amount spent on quelea control in any previous season.

The pesticide is a non-residual poison which breaks down quickly and, while lethal to the queleas, has a low toxicity to other animal life and a minimal effect on the ecological cycle. No cases of human illness associated with eating poisoned queleas have been reported. "In a sense, it is a nice poison," said Dr Mundy.

Other means of killing them for export to foreign cooking pots are being tried but as yet have not succeeded in killing the pests in sufficient numbers. The methods include electrification, the use of nets and dowsing the roosts with water. None were more than about one-tenth as effective as pesticide spraying.

It could even be more profitable to the farmer to grow wheat to attract the quelea for later harvesting, canning or freezing and export to the gourmet market abroad.

"They want them as a delicacy and the foreign currency returns would be high if we could harvest them on a large enough scale."

Dr Mundy said Zimbabwe would also be playing an important part in conservation if it could flood southern European markets with the quelea. Many migrating thrush, warbler and other bird species are shot or netted for the cooking pot as they cross southern France, Spain, Italy and Malta on their way south to Africa.

The quelea is in the same family of species as the thrush. "Our quelea could reduce the market for the migratory birds which are being killed for the pot on a scale that can only be described as an international scandal," Dr Mundy said.

/8309

CSO: 5400/27

ZIMBABWE

TOP VET ADVISES HOW TO FIGHT CHICKEN BUG

Harare THE HERALD in English 23 Oct 85 p 5

[Text] Poultry producers should order chickens from registered breeders to combat an outbreak of Newcastle disease in Zimbabwe's north-east, the Government poultry pathologist, Dr George Gwaze, said in Harare yesterday.

Dr Gwaze was commenting on measures being taken to restrict the outbreak to Mukumbura, near the border where the disease is suspected to have spread from Mozambique. The Mozambique Government reported in February that there had been an outbreak.

"At the moment we are carrying out a vaccination campaign against Newcastle in Mukumbura," Dr Gwaze said. "We have also erected a roadblock manned by police and Veterinary Services staff about 35 km from Mukumbura. Every vehicle passing through there has to be checked and any chicken found will be impounded."

Dr Gwaze said he had sent 25,000 doses of Newcastle disease vaccine for use by teams going from village to village.

"The situation should be under control at the moment because our control teams are working flat out even on weekends," said Dr Gwaze. "We have sufficient vaccines to cope with any serious outbreaks."

The disease in Mukumbura was first noticed three weeks ago.

The chairman of the Commercial Poultry Producers' Association, Mr Dave Irvine, said members were advised last week that there was an outbreak in Mozambique and Mukumbura.

"People in the northern areas have been warned that they should take adequate precautionary measures and make sure that their vaccine programmes are adequate and up to date," he said.

Unlike other diseases, he said, Newcastle was not much of a problem where vaccines are available.

/8309

CSO: 5400/27

BARBADOS

BRIEFS

DIAMOND BACK MOTH--Barbadian food crop farmers are continuing to lose money as a result of attacks on their vegetables by the dreaded Diamond Back Moth. Sources said yesterday that the pest which is prevalent especially during the rainy season, has forced some farmers to plough back large volumes of cabbages and cucumbers two of the vegetables hardest hit by the pests. A spokesperson from the Barbados Marketing Corporation (BMC) confirmed there was a problem with the moth, but said that farmers were getting in control of it through the spraying of their fields. [Excerpt] [Bridgetown BARBADOS ADVOCATE in English 5 Oct 85 p 1]

/9365

CSO: 5440/012

BOLIVIA

BRIEFS

COFFEE PLAGUE OUTBREAK--An outbreak of stephanodores [coffee plague] has been detected in the coffee plantations in North Yungas Province, La Paz Department. [Summary] [La Paz Cadena Panamericana in Spanish 1130 GMT 1 Nov 85 PY]

/9599

CSO: 5400/2014

ETHIOPIA

SYMPOSIUM ON WHITEFLY CONTROL UNDERWAY

Addis Ababa THE ETHIOPIAN HERALD in English 10 Oct 85 pp 1, 4

[Text] A six-day symposium on the control of whitefly threatening cotton production and to formulate practical strategies against the pest and thereby maintain the foreign exchange earning from the product was opened here yesterday at the Ethiopian Chamber of Commerce.

Organized by the committee of the Ethiopian Entomologists in co-operation with the Awash Agricultural Development Corporation of the Ministry of State Farm Development, the symposium is being attended by scientists and experts from the Addis Ababa University, the Alemaya Agricultural University, the Institute of Agricultural Research (IAR), the Ministry of Agriculture, the State Farms Development, the Relief and Rehabilitation Commission (RRC) the Awassa Junior Agricultural College, the Ambo Phytopathology Laboratory as well as by representatives of the agro-chemical industries in Ethiopia and other concerned agencies.

The symposium will examine papers on major cotton pests which will be presented by prominent scientists from the United Kingdom, the Federal Republic of Germany (FRG), Sudan, Switzerland, Kenya as well as from Ethiopia.

The objectives of the symposium is to devise protection against the whitefly which threatens cotton production at the Lower Awash.

Opening the symposium, Comrade Ambisa Wakoya, Vice-Minister of the Ministry of State Farm Development said that cotton production has to increase three fold to meet the demands of the existing local textile mills.

He pointed out that the Ethiopian cotton has won three international awards so far, and added that purchase requests are from both eastern and western countries which is a clear testimony to the quality of the country's cotton.

Speaking earlier Comrade Adhanom Negassie, President of the Ethiopian Entomologists Committee, pointed out that the committee was established in 1981 under the auspices of the Sciences and Technology Commission. He said that the committee was set up in view of the importance of applied entomology in the Ethiopian agriculture which is the backbone of the country's economy.

He stressed the need for a more united approach among entomologists to solve Ethiopia's entomological problems, through contacts among professional entomologists to enhance the exchange of knowledge and experiences.

(ENA)

CSO: 5400/19

INDIA

## PANEL DISCUSSES SPREADING COCONUT TREE DISEASE

Madras THE HINDU in English 20 Sep 85 p 12

[Text]

COIMBATORE, Sept. 19.

The root-wilt disease, which wrought havoc to the coconut plantations in Kerala, has recently made its appearance in the districts of Tamil Nadu adjoining Kerala State.

In Kottayam, 75 per cent of the trees are affected by this disease and the present loss is estimated at 968 million nuts per year, according to a recent survey conducted by the Central Plantation Crops Research Institute, Kaseragod.

The disease in Tamil Nadu was noticed first in 1974 in Tamil Nadu in Kanyakumari district and later in Coimbatore district in 1983. A survey undertaken by the scientists and officers of the Directorate of Oilseeds, Tamil Nadu then indicated that 92 trees were infected in Coimbatore district. The disease was also reported in Tirunelveli district.

It is feared that this infection must have spread through seedlings from Kerala, especially in areas adjoining the Kerala border and, if left unchecked, may threaten coconut cultivation in Tamil Nadu.

**Scientists discuss infection:** The gravity of the infection was discussed at a meeting of scientists engaged in the study and control of diseases in coconut from Tamil Nadu, Kerala, Andhra Pradesh and Karnataka held at the Centre for Plant Protection Studies of the Tamil Nadu Agricultural University on September 12. The meeting was inaugurated by the Vice-Chancellor, Dr. V. Rajagopalan who called upon the plant pathologists to develop effective management practices for coconut diseases. Since the Thanjavur wilt, root wilt, bud rot and leaf spot problems were assuming national importance, the Vice-Chancellor sought positive programmes from scientists to tackle these diseases.

The research scientists who met under the guidance of Dr. S. Jayaraj, Director, Centre for Plant Protection Studies and Dr. P. Rethinam, Project Coordinator (Coconut), reviewed the details obtained from all the southern States and devised a strategy for the next two years to develop effective management practices.

**Early diagnosis necessary:** Dr. Jayaraj told THE HINDU that in recent years the root (Kerala) wilt, ganoderma (Thanjavur) wilt, bud rot and leaf spot penetrated the southern States through seedlings. They also spread by air, soil and irrigation water. In some cases trees affected by bud rot and ganoderma could be saved if the infection was diagnosed at an early stage, said Dr. Jayaraj.

**Recommendations:** The meeting made the following recommendations:

For ganoderma (Thanjavur) wilt an intensive survey should be undertaken to gauge the extent of the spread of the disease in the four States. Research would be intensified to establish the pathogenicity of ganoderma isolated from infected trees. At present this disease was found to spread by basidiospores produced in thousands in bracket-shaped structures at the base of the infected tree. When the roots of a diseased plant comes in contact with the roots of a healthy plant the disease spreads.

To determine the role of these two processes in the spread of the disease, it was decided to study the effect of digging trenches around the affected trees. Another serious problem is that the disease is diagnosed only after the infection has progressed within the plant. Early use of fungicides before supply to growers.

Regarding the possibility that the pathogen could spread through irrigation water and channels connecting one tree basin to the other, a new basin system was to be devised whereby the water flowing through a central channel could be branched off to the trees independently through sub-channels.

This disease is also influenced by climatic factors. Hence the role of soil temperature at different depths, soil moisture and rainfall must be studied so that models could be developed to suit different tracts for forewarning farmers.

As for the control of root-wilt, it was decided to conduct a survey of coconut plantations in the districts adjoining Kerala by a team of scientists of the University, the Central Plantation Crops Research Institute and officials of the Oilseeds Department and arrange for the elimination of all infected trees immediately.

/9274

CSO: 5450/0009

NIGERIA

KILLER BUG HITS COCOA CROPS

Lagos SUNDAY TIMES in English 29 Sep 85 p 24

[Text]

**N**IGERIA may lose millions of naira in export earnings this year as a result of large-scale destruction of cocoa crops by black pod disease.

It is estimated that more than 60 per cent of this year's anticipated cocoa harvest has been lost due to non-availability of chemicals to spray cocoa trees. Cocoa farmers in Ondo, Oyo, Ogun and Bendel States are hardest-hit by the disease.

Officials of the Nigerian Cocoa Board have described the situation as a national tragedy which is being kept under wraps.

At the Cocoa Research Institute of Nigeria (CRIN), Ibadan, a senior agronomist said that there was an urgent need to make fungicide available to cocoa farmers. He described the situation on the farms as "a state of emergency".

According to a top official of the International Institute of Tropical Agriculture (IITA), Ibadan, agroche-

micals was the lifeblood of agriculture and they need to be imported on a large scale if Nigeria's agricultural goals are to be met".

In the southern parts of Nigeria in particular, agricultural output could not be substantially increased without adequate supply of herbicides, fungicides and insecticides.

"These agrochemicals are far more important to farmers in the South than fertilizers because the soil in this area is naturally fertile".

The major marketers of agrochemicals in Nigeria are Chemical and Allied Products Ltd (CAPL), Hoechst, Ciba-Geigy and Pfizer, complained of inadequate import licences to bring in agrochemicals.

CAPL agricultural division general manager, Mr. A. Kolade, said that the Federal Government should do something urgently about importation of agrochemicals.

/9312

CSO: 5400/18

NIGERIA

BRIEFS

LOCUSTS DESTROY CROPS--Farm produce worth ₦70,000 were destroyed by locust in Ganawa village, in the Mariga local government area of Niger State. The sole administrator, Alhaji Alhassan Abdul-Salami, has said. Addressing newsmen in Ganawa, Niger State, Alhaji Alhassan said that the control measures had proved ineffective and called on the state and federal pest control departments to come to the aid of the farmers in the area, adding "if an immediate step is not taken to check the locust, the destruction might spread to other areas in the state." Alhaji Alhassan advised farmers in the area to report further outbreak of the pest so that his office would be able to determine the total cost of damage. The sole administrator, who commended the ban on the importation of rice, however, said that effective pest control was necessary to meet the people's demand for the local production of rice and maize. [Text] [Enugu DAILY STAR in English 18 Oct 85 p 12]

/8309

CSO: 5400/26



ST LUCIA

BRIEFS

PLANT PROTECTION SERVICES--Castries, Nov 3--St Lucia has signed a 243,000 dollar (one EC dollar: 37 U.S. cents) agreement with the United Nations Food and Agriculture Organisation (FAO) to upgrade the country's plant protection and quarantine services. An FAO statement said the project will assist the government in the establishment of an effective service through the provision of equipment and material to set up a new pathology and entomology laboratory, the training of crop protection and plant protection staff, the drafting of new plant quarantine laws and plant import regulations, as well as the design of survey and protection systems. The FAO said the assistance was timely in light of the recent discovery of the mango weevil in the country, which has presented a serious setback to government's thrust towards the establishment of non-traditional export crops. The agreement was signed by St Lucia's Minister of Agriculture, Fisheries and Cooperatives Ira Dauvergne and FAO representative Frederick Zenny. [Text] [Bridgetown CANA in English 1345 GMT 3 Nov 85 FL]

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CSO: 5440/14

VIETNAM

BIOLOGICAL PROTECTION EMPLOYED IN VIETNAMESE FORESTS

Hanoi QUAN DOI NHAN DAN in Vietnamese 25 Aug 85 p 2

[Article by Dao Viet Hien: "Biological Weapons Protect Cultivated Forests"]

[Text] Cultivated forests play an especially important role in covering vacant land and bare hills and mountains with green, both to resurrect previously lost forested lands with a structure of our own desire with restoration and creation of an ecologic balance, and as a concentrated source of raw materials for the processing industry. In the past, we have emphasized promotion of afforestation, initially forming fairly large forests providing raw materials such as paper fiber, oleoresin, mine supports, construction lumber, fruit trees, etc. This process, scientific and technical forest protection, has been developed by various types of weapons and formulas, including the initial study and use of biological weapons with biological struggle methods that have created a basis for a new direction in the future protection of our forests.

The first time that biological struggle methods were used in the world to protect cultivated trees was at the end of the last century. However, only today has rapid development been made in scale, nature and economic effectiveness. This method relies on the phenomena of mutual opposition and extermination between various living things in nature. The weapons used by man to protect the trees are living creatures and the products created during their life process. These are animals (beneficial insects that eat harmful insects or parasites, and birds and animals that eat nematodes), plants (fungi, bacteria, viruses and rickettsia), and substances secreted by living things (antibiotics, hormones, pheromones and depressants).

Our people from long production practice have also used beneficial animals and plants in rudimentary forms in the eradication of insects harmful to trees. During the past few years, a problem of an urgent nature concerning cultivated forests has been infestations of destructive insects and disease. Noteworthy have been insect infestations of the pine, mo and bo forests that cause a loss of leaves over a wide area in only 20 to 40 days; caterpillar attacks on pine trees that spread through nearly the entire cultivated horsetail and threeleaf pine area, killing many trees and reducing lumber output; the infestation of leaf eaters that stripped hundreds of hectares of virgin chestnut forest in Cao Bang; the red ironwood leaf eater infestation that damaged many of the ironwood forests in Vinh Phu, Quang Ninh, Thanh Hoa, Ha Son Binh, etc. The use of chemical insecticides to eradicate harmful insects and disease has definite limitations. Due to the tropical climate, the temperature and humidity are

high and the rainfall is heavy, causing insecticides to quickly evaporate and dissolve; and we have a shortage of both insecticides and spraying tools. This does not count the number of areas in which the arbitrary use of chemical insecticides has upset the pest cycle and the forests have been damaged by insects virtually every year.

The Institute of Forest Project Investigation through investigations of beneficial insects has discovered a small brown ant that eats the eggs of a species of mo tree leaf eating bee. Results have indicated that, depending on each phase of infestation, 90 to 100 percent of the harmful bee eggs on mo trees within 4 meters of the ant nest are eaten; and 80 percent of those within 8 meters are eradicated by the ants. A yellow ant is used by our people to effectively kill insects harmful to oranges. Illuminated by science, the benefits of the ant are clearly defined: each day, one large ant nest is able to kill thousands and tens of thousands of insects, creating a source of food for the various species of wild fowl, birds, etc. that eat harmful insects; and transmit tree seeds to assist in forest expansion. In the Soviet Union, a campaign was launched 10 years ago to protect ants, including stipulations on the material responsibilities of individuals harming ants.

Our country has up to thousands of species of birds and research conducted on 71 of the commonly encountered species has concluded that 30 specialized in or primarily ate insects harmful to the forest. The chan dat eradicates 41 to 90 percent of harmful insect larva around the trunk of the tree in which it lives. Several years ago, we invested in the use of species of parasites to kill seed insects. Worthy of attention was the red-eyed bee which laid its eggs in the harmful insects; the eggs developed into bees and immediately killed the harmful insects.

Another course is use of the manufactured microorganism bacillus thuringiensis, a type of bacteria resistant to harmful insects, which has been produced on an industrial scale in our country. After ingesting the bacteria, the pH value of the insect's intestinal tract changes, the entire physiological condition of the body is disturbed, resistance gradually fades, and the insect is killed. As time goes by, many new species of parasites are being found: trichogramma, a class of extremely small insects, can exist as a parasite in the eggs of nearly 200 species of harmful insects.

Research, production and use of methyl organon in the protection of cultivated trees in our country has been achieved recently. It is a substance that attracts the yellow orange fly to a location where insecticide is placed. Its use in many orchards has clearly reduced the number of damaged oranges and increased yields and product quality. Research results have also opened the way for the use of substances that inhibit the procreation and growth processes of harmful insects. Pure pheromone kills forest caterpillars, apple borers, fruit flies, etc. Interferon, a substance found in animals which has been used in the experimental treatment of human cancers, is also able to kill harmful insects. An extremely large number of poisonous plant varieties are also sources of highly effective insecticides.

Biological struggle with many types of weapons along many different courses is being conducted with an objective of affecting the harmful forest insect group

as well as the forest ecosystem. The climate and natural conditions of our country with its rich animal and plant resources are a good foundation for the development of biological methods. With investment in research and attention to production and use, biological struggle is one method along with others in establishing a composite strength to assist in keeping the forest green in the campaign to protect, build and develop forestry assets in our country.

7300

CSO: 5400/4311

VIETNAM

VEGETATION DEPARTMENT ISSUES NOTICE ON INSECT INFESTATION

BK211235 Hanoi Domestic Service in Vietnamese 2300 GMT 19 Oct 85

[Text] The Vegetation Department recently issued a notice saying that in various Bac Bo lowland provinces, harmful army worms are ravaging many rice fields where rice is nearing or is in the ripening state. The density of the worms varies from 2 to 5, or even 15 to 20 insects per square meter. In some areas there are 50-70 insects per square meter. These insects are in the age groups 3 or 4. Brown leafhoppers are now destroying parts of infested rice areas planted with such rice varieties as nong nghiep 75/10 and glutinous rice.

In a number of areas in Hai Hung and Hanoi, there exist many small pockets of infestation. As for stem borers, those of the fifth generation are decreasing in number with the density of their eggs deposited on rice stalks averaging from 0.2 to 0.5 nest per square meter or, in areas with greater concentration, from 2 to 3 nests per square meter. Meanwhile, larvae are attacking the main and late rice plantings, causing the rice ears to wither in some fields, especially those put under glutinous rice.

In the southern provinces, leaf folders are ravaging the late rice plantings. In Phy Khanh Province alone, more than 1,000 hectares of rice are affected. Rice army worms are also attacking the late rice plantings in the Mekong River delta.

It is forecast that in the coming period, army worms will do serious damage to the main and late plantings of 10th-month rice in the northern provinces. Between now and early November, brown leafhoppers and stem borers will attack the main 10th-month rice plantings. In view of this, all localities must actively inspect rice fields and zone off the effected areas to exterminate all the pockets of army worms and brown leafhoppers, using chemical insecticides together with manual methods to control stem borers and their larvae in fields put under the late 10th-month rice.

Meanwhile, the southern provinces must water and control stem borers, leaf rollers, caterpillars, and beetles. It is necessary to perform sanitation work in rice fields before transplanting the winter-spring rice.

CSO: 5400/4314

VIETNAM

VEGETATION PROTECTION DEPARTMENT ON CROP PESTS

OW030721 Hanoi Domestic Service in Vietnamese 1100 GMT 31 Oct 85

[Text] According to a notice issued recently by the Vegetation Protection Department of the Ministry of Agriculture, army worms, stem borers, brown planthoppers, and other insects are still ravaging the 10th-month rice crop. Damage caused by army worms has spread in the northern provinces and cities, and the ravaged area in the entire region amounts to 35,000 hectares. The average density of insect infestation is 5-10 or up to 200-300 insects per square meter in some localities. Localities have exerted intensive efforts to eradicate insects and prevent them from causing heavy damage.

In some areas, egg nests of brown planthoppers are still developing on the main 10th-month and glutinous rice crops. Larvae of stem borers have ravaged the rice in some areas in Thai Binh, Ha Nam Ninh, and Ha Son Binh Provinces. Stem borers have blighted blossoms on the glutinous rice crop in Nghe Tinh Province and are continuing to ravage the third-month and late 10th-month rice crops in the Central Vietnam's coastal provinces. White-back flies and brown planthoppers have caused damage in some areas in the southern provinces, but the insect-infestation density still remains low.

Leaf rollers and buoy-like worms [saau phao] have ravaged the rice crop in the Mekong Delta. Corn ear worms are developing on the corn crop and black cut worms, leaf-eating caterpillars, plant lice, and striped flea beetles have begun to ravage the winter subsidiary crops in Hau Giang Province and Ho Chi Minh City.

It is forecast that in the days ahead, army worms will continue to ravage the main and late 10th-month rice crops while brown planthoppers and rice bugs will cause damage in small areas and leaf-eating caterpillars and black cut worms will develop on winter crops with a higher infestation density. Stem borers, leaf rollers, and buoy-like worms will continue to develop vigorously in the southern provinces.

It is suggested that the northern provinces continue to eradicate army worms, quickly harvest the ripe 10th-month rice, and prevent insects from ravaging the winter crops. Meanwhile, the southern provinces should strive to eradicate rice caseworms, stem borers, buoy-like worms, and paddy thrips; properly carry out sanitary work in ricefields; and prevent crop pests from spreading over the winter-spring rice crop.

/6662

CSO: 5400/4318

ZIMBABWE

PRESENT ERADICATION LAWS CANNOT ENSURE REMOVAL OF BOLLWORM RISK

Harsher Penalties for Late Eradication

Harare THE FINANCIAL GAZETTE [Farming] in English 4 Oct 85 p 23

[Text]

THE Commercial Cotton Growers' Association has begun a campaign to beef up Zimbabwe's cotton eradication laws which it says are not adequate to beat the growing menace of complete pink bollworm infestation.

The campaign will press the government to harshen the penalties for late eradication, and to provide more money for inspectors to enforce the law.

The CCGA president, Mr Peter Henderson, told *Farming Gazette* this week that the late eradication problem was unusually severe this year.

"We've flown over the whole country and the situation is bad. It's a perennial problem but it's now worse than ever before," he said.

A great deal of lip-service was paid to late crop eradication, but the CCGA was not convinced that the government was fully aware of the problem, and once it was aware, government would act more forcefully.

Mr Henderson emphasised the national nature of the cotton industry. Cotton was grown by all sections of farmers, was a major foreign currency earner, and was a source for future growth.

But if late eradication of the crop was allowed to continue, the industry would be severely damaged, largely through the loss of major contracts with overseas spinners.

The CCGA had spent \$9 000 on extra mileage for eradication inspectors in a bid to improve eradication, but the association was firm in its belief that this cost should be borne by the treasury.

The average fine paid by growers violating the eradication regulations was \$50 and that was not enough to ensure due respect for the law.

"We need a sentence so effective that it only ever needs to be imposed once," said Mr Henderson.

The national grading and eradication committee was now considering innovations in the existing legislation. These included a change of law whereby an offending grower

was forced to pay for the inspector's mileage to his farm.

This money would not be extracted through the usual process, but would be debited direct from the grower's CMB account. Such a step would also allow more mileage for inspectors and would have the elegant effect of offenders paying for law enforcement.

NO KNOWN PESTICIDE

Mr Henderson said there was no known pesticide which was effective against the pink bollworm. While the spread of red and green bollworms could be chemically controlled, the pink worm was invisible during normal inspection and could spread easily.

Parts of the United States and Australia had to stop cotton production because of severe pink bollworm infestation, and Zimbabwe could not afford such measures.

"This is one example of where you can't learn by experience," said Mr Henderson. "Once you've got an infestation of pink bollworm it's simply too late and you could lose your industry."

\$6,000 for Fight Against Cotton Pest

Harare THE HERALD in English 8 Oct 85 p 3

[Text]

THE Cotton Growers' Association has given the Department of Natural Resources \$6 000 to help stop the spread of the pink bollworm infestation.

About \$1 000 has already been spent on flights to inspect areas where cotton stalks, which cause the spread of the pest, had not yet been destroyed, a spokesman for the department said in Harare yesterday.

The remaining \$5 000 is to help field officers to inspect farms and prosecute farmers who had not destroyed the cotton stalks by August 15 in the Lowveld or by September 10 each year as required by law.

Before the association donated the money the officers could not effectively do their work because their allocated 250 km mileage per month was inadequate. The donation has helped increase their mileage per month, said the spokesman.

Last year the department received \$3 000 from the association to help the field officers do their work. — Ziana.

CSO: 5400/17



ZIMBABWE

## NEMATODE DAMAGE CAUSES PATCH GROWTH

Harare THE FINANCIAL GAZETTE [Farming] in English 4 Oct 85 p 26

[Text]

THE sight of patchy crop growth is becoming more and more familiar in Zimbabwe, despite adequate fertiliser and insecticide application. Sometimes this patch growth may be caused by nematode damage.

Entomologist Mr Faruk Ghumra said that over the past few years farmers had slowly become aware of the problems nematodes can cause in crops other than tobacco, where the damage they can cause has long been appreciated.

There is, however, still a need to further educate farmers on this problem. In cases where for example, farmers find their maize growth to be patchy and yields low, they might ascribe the problem to weeds or insects, but on treatment with the appropriate agro-chemicals there may be no improvement.

"This is when we suggest to farmers that they send soil and plant samples for nematode analysis, as we often find that they are the cause of the problem," said Mr Ghumra. Although nematodes are more often a problem on sandy soils, it is not uncommon to find that they can also cause crop losses on the heavier soil types.

Often referred to as eelworm, the plant-parasitic nematodes are microscopic worm-like creatures, varying in between 0,4mm and 1,5mm in length. Their cylindrical, thread-like bodies generally taper at both ends.

A classification of plant-parasitic nematodes may be based on the way in which they feed; endoparasites invade the plants and feed inside the tissue, while ectoparasites generally feed from outside the plant.

The endoparasitic group may be further divided into sedentary and migratory groups. A well known example of the former is the root-knot nematode, which in Zimbabwe is likely to be *Meloidogyne javanica*.

The main symptoms of attack by root-knot nematodes, as well as other nematodes, are reduced and unthrifty growth and a tendency for the affected plant to wilt on warm days. The affected plants are often much paler in colour, as if they were suffering from a nutrient deficiency — nematode damage can rob the roots of their ability to absorb nutrients, even though the soil may be fertile.

On potatoes watery lesions appear protruding above the skin surface. These collapse on drying, leaving rough, crinkly scar tissue which looks very like scab, or like potatoes which have been grown on heavily limed soil. However, on cutting such potatoes, watery or translucent areas are visible.

Migratory endoparasitic nematodes, such as the burrowing and root-lesion types, can move around both inside and outside the tissue.

The burrowing nematode attacks the most important roots, often drastically reducing them in size so that the weakened plant often collapses.

Root-lesion nematodes cause brownish lesions on the roots, and may affect maize, bananas, groundnuts and soyabeans. Although found in tobacco roots, they are not normally considered to be a serious problem, as chemicals used to control root-knot nematodes will usually control them as well.

Maize may also be attacked by some of the ectoparasitic group, in particular the stubby-root nematode whose feeding causes stunting of the roots.

The citrus nematode belongs to the semi-endoparasitic group — sedentary nematodes which feed with the head inside the root and the often swollen body outside.

Symptoms usually include leaf and twig dieback and reduced fruit production, usually more pronounced in the upper part of the tree. Decline is gradual and is most often seen in trees over 12 years old.

Soil treatment with chemicals can be an effective way to control nematodes. In high-value cash crops like tobacco it is a standard practice where to fumigate seedbeds with methyl bromide and lands with EDB, unless the crop to be grown is very sensitive to bromide damage.

Fenamiphos (sold as Nemacur) can be used to control nematodes which attack bananas, tomatoes, potatoes, citrus and pineapples, while Carbofuran (sold as Curaterr or Furadan) controls those attacking maize. In addition to chemical control farmers are also advised to include non-host crops in their rotations to reduce nematode numbers throughout the soil. Thus, potatoes should be rotated with cotton and groundnuts (but never *tsetse*, which makes an excellent host for the root-knot nematode), and also the recommended grasses grown for three or four years between tobacco crops.

Leaving the land fallow is not a good way to reduce nematode num-

bers, as some nematodes can survive for several years under conditions of bare fallow, which can also be a serious erosion hazard. A weed fallow is not much use.

Irrigation water can be a source of nematodes, particularly if heavy rain has washed soil into dams and rivers. Allowing the water to stand for at least 24 hours will allow the nematodes to settle and then the water can be drawn from the surface of the dam at a point well away from the sides.

What can the farmer do to help control the nematode pest? Firstly, he can rotate his cash crops with nematode-resistant crops where possible and use the correct chemical control measures.

If he is growing fruit or commercial roses he must ensure that his source is a reputable nursery, which does not give away "free" nematodes with every seedling!

On the farm, good husbandry, and maintenance will help to limit nematode spread.

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END